Idaho Department of Environmental Quality 2020 Ambient Air Quality Monitoring Annual Network Plan

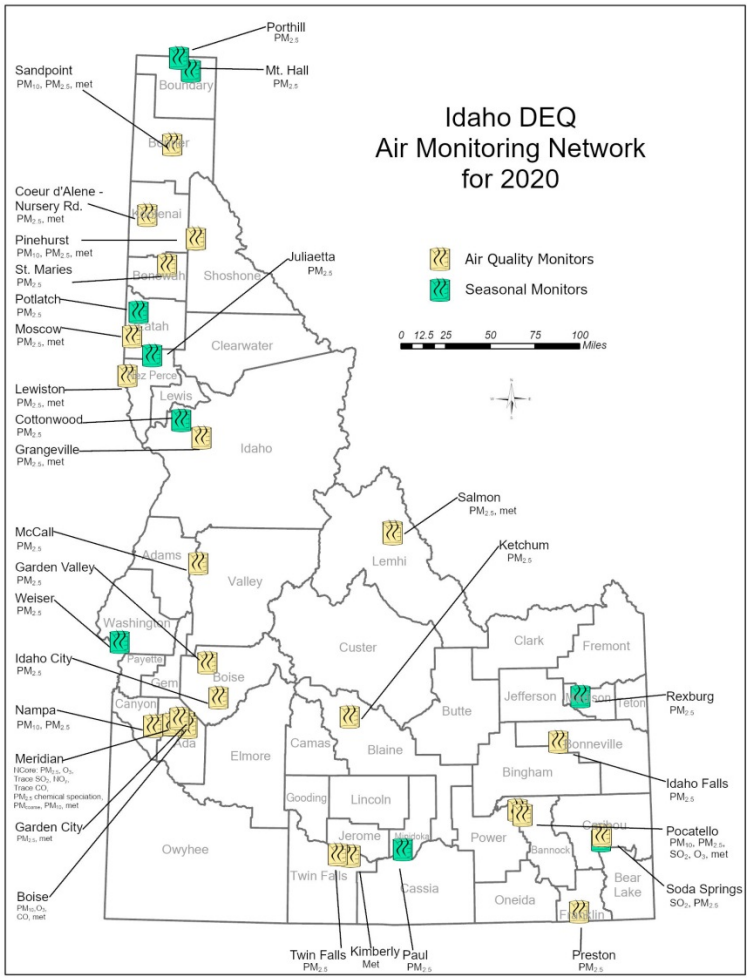

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Table of Contents

List of Tables

List of Figures

Abbreviations, Acronyms, and Symbols

µ	micron
µg	microgram
AQI	Air Quality Index
AQS	air quality system
ARM	approved regional method
BAM	beta attenuation monitor
CBSA	core-based statistical area
CDD	clean data determination
CFR	Code of Federal Regulations
CO	carbon monoxide
CRB	crop residue burning
CSA	combined statistical area
DEQ	Idaho Department of Environmental Quality
DV	design value
EPA	United States Environmental Protection Agency
FEM	federal equivalent method
FRM	federal reference method
m	meter
m^2	square meter
m^3	cubic meter
MSA	metropolitan statistical area
mbar	millibar
NAA	nonattainment area
NAAQS	National Ambient Air Quality Standards
NO	nitric oxide
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NO_y	total reactive nitrogen
O_3	ozone
POC	parameter occurrence code
$PM_{2.5}$	particulate matter with diameter less than or equal to 2.5 microns
PM_{10}	particulate matter with diameter less than or equal to 10 microns
$PM_{10-2.5}$	particulate fraction with a nominal diameter between 2.5 and 10.0 microns
ppb	parts per billion
ppm	parts per million
s	second

SCC sharp cut cyclone
SIP state implementation and maintenance plan
SLAMS state and local air monitoringstation
SO_2 sulfur dioxide
SPM special purpose monitor
STN Speciation Trends Network
STP sewage treatment plant
TEOM tapered element oscillating microbalance
VSCC very sharp cut cyclone
XRF x-ray fluorescence

Executive Summary

The objective of the Idaho Department of Environmental Quality's (DEQ's) 2020 ambient air quality monitoring annual network plan is to determine whether the state's ambient air quality monitoring network is achieving its monitoring objectives and identify any needed modifications. While this is an ongoing annual assessment, DEQ also conducts a comprehensive 5-year network assessment, which was completed in 2015 and is found at *www.deq.idaho.gov/media/60177248/ambient-aq-monitoring-network-5-year-assessment.pdf*.

DEQ proposes the following network modifications in this year's annual network plan:

- Continue to replace the existing 2025 federal reference method (FRM) $PM_{2.5}$ monitors with Met One Instrument's E-SEQ-FRM $PM_{2.5}$ monitors at all the current 2025 FRM sites. The 2025 FRM monitors were discontinued and are no longer supported by the manufacturer.
- The Sandpoint monitoring site location, owned by University of Idaho, was sold in2019. DEQ is reviewing alternative site locations in the area to relocate the monitors.
- Install a meteorological tower at the St. Marie's site. This tower will monitor thesame parameters as the existing sites in the Coeur d'Alene region.
- Local changes in site operations at the Nampa Fire Station site could impact particulate matter $(PM)_{2.5}$ and PM_{10} concentrations in the future. DEQ is searching for an alternative site in the metropolitan statistical area (MSA) to relocate the existing monitors. As a SLAMS site, DEQ will coordinate any site relocation with EPA Region 10.
- Relocate the existing beta attenuation monitor (BAM) $PM_{2.5}$ special purpose monitor (SPM) in Ketchum to a new site at the Hailey Fire Station.
- Decommission the meteorological tower for the Lakes Management Plan; this location is no longer required by the group.
- Replace remaining relative humidity sensors, HMP45C with new HMP155A.
- Relocate the existing BAM $PM_{2.5}$ SPM in Garden City to the Boise State University (BSU) campus.

Since submitting the 2019 annual network plan, DEQ made the following modifications to the network. Some items required United States Environmental Protection Agency approval, while less significant items did not.

- Replaced the remaining Thermo Scientific 1400AB PM_{10} monitors with BAM 1020 PM_{10} monitors. In 2019, BAM 1020 monitors were deployed at the Boise-Fire Station #5 and Sandpoint sites.
- Replaced the 2025 FRM $PM_{2.5}$ monitor at Pinehurst with Met One Instrument's E-SEQ- FRM $PM_{2.5}$ monitor.
- Removed the collocated 2025 FRM PM_{10} precision monitor at the St. Luke's site. Collocated PM_{10} monitoring for coarse measurements is no longer a regulatory requirement.
- To address power and access concerns at the Soda Springs location, the E-Sampler$PM_{2.5}$ SPM was relocated from a rooftop location to an adjacent ground-level location.
- The eastern Idaho ozone modeling and assessment was completed. The Garrett and Gould site in Pocatello was selected for DEQ's ozone monitoring efforts in easternIdaho.

The monitoring equipment was procured, and site improvements and staff training were completed. Sampling began April 1, 2020.

- Relocated the BAM 1020 $PM_{2.5}$ SPM monitor from the Lancaster site to the new site in Coeur d'Alene (Nursery Road).
- Changed the sampling frequency of the 2025 FRM $PM_{2.5}$ monitor at the Nampa Fire Station site to 1:1.
- Deployed a BAM 1020 $PM_{2.5}$ SPM at the Garden City monitoring site.
- DEQ sought and received a waiver from EPA from operating an ozone monitor in the Logan UT-ID MSA.

1 Introduction

In accordance with federal requirements, the Idaho Department of Environmental Quality's (DEQ's) 2020 ambient air quality monitoring annul network plan is used to determines whether the state monitoring network is achieving its monitoring objectives and identify any needed modifications. The appendices provide additional information on network design values (Appendix A), the IMPROVE monitoring network (Appendix B), supplemental correspondence (Appendix C), and federal requirement checklists (Appendix D).

Idaho's monitoring network has four principal objectives: (1) assess compliance with National Ambient Air Quality Standards (NAAQS); (2) support smoke management programs, including agricultural and prescribed burning practices; (3) identify emergency episodes caused by windblown dust or wildfire; and (4) support the evaluation of state implementation and maintenance plans (SIPs). In addition, DEQ operates a network of continuous fine particulate matter ($PM_{2.5}$) monitors and surface meteorology stations to support air quality forecasting, the Air Quality Index (AQI) program, and modeling projects. DEQ also leverages the IMPROVE monitoring network to fulfill requirements for the $PM_{2.5}$ transport (Hells Canyon) and $PM_{2.5}$ background (Craters of the Moon National Monument) monitoring sites (Appendix B).

Beginning July 1, 2007, state agencies were required to adopt and submit to the United States Environmental Protection Agency (EPA) regional administrator an annual monitoring network plan (40 CFR 58.10). The plan shall provide for the establishment and maintenance of an air quality surveillance system that consists of a network made up of the following types of monitoring stations:

- State and local air monitoring stations (SLAMS), including monitors that use the following methods:
  - Federal reference method (FRM)
  - Federal equivalent method (FEM)
  - Approved regional method (ARM)
- NCore stations (included in the national network of multipollutant monitoring stations)
- $PM_{2.5}$ (particulate matter with diameter less than or equal to 2.5 microns [µ]) Speciation Trends Network (STN) stations
- Special purpose monitoring (SPM) stations

This plan also lists seasonal $PM_{2.5}$ monitors used for smoke and agricultural burning management.

The plan shall include a statement of purpose for each monitor and evidence that siting and operation of each monitor meet the requirements of Appendices A, B, C, D, and E of 40 CFR 58 where applicable (Appendix D).

This plan is provided to the public for inspection for 30 days before submission to EPA and subsequently includes public comments and responses (Appendix E). Any annual network plan that proposes SLAMS network modifications—including new monitoring sites—is subject to

approval by the EPA regional administrator, who shall approve or disapprove the plan within 120 days.

All stations are required to be operational by January 1, 2021, and specific locations for the required monitors are included in this plan. The annual network plan provides the following required information for existing and proposed sites where appropriate:

- Air quality system (AQS, EPA database) site identification number
- Location, including street address and geographical coordinates
- Sampling and analysis method for each measured parameter
- Operating schedules for each monitor
- Proposals to remove or move a monitoring station within 18 months followingplan submittal
- Monitoring objective and spatial scale of representativeness for each monitor asdefined in Appendix D to 40 CFR 58
- Identifies any sites that are suitable or unsuitable for comparison against theannual $PM_{2.5}$ NAAQS as described in 40 CFR 58.30
- Metropolitan statistical area (MSA), core-based statistical area (CBSA), combined statistical area (CSA), or other area represented by the monitor
- Designation of any lead monitors as either source-oriented or nonsource-oriented (i.e., NCore) according to Appendix D of 40 CFR 58
- Source-oriented monitors for which a waiver has been requested or granted by theEPA regional administrator as allowed for under paragraph 4.5(a)(ii) of Appendix D to 40 CFR 58
- Source-oriented or nonsource-oriented site for which a waiver has been requested or granted by the EPA regional administrator for the use of lead-PM_{10} (particulate matter with diameter less than or equal to 10 µ) monitoring in lieu of lead-total suspended particulate monitoring allowed under paragraph 2.10 of Appendix C to 40 CFR 58

The annual network plan documents how states and local agencies provide for the review of changes to a $PM_{2.5}$ monitoring network that impact the location of a violating $PM_{2.5}$ monitor. The affected state or local agency must document the process for obtaining public comment and include any comments received through the public notification process within their submitted plan.

2 Air Quality Surveillance Systems and Monitoring Objectives

Ambient air monitoring objectives have shifted over time, requiring air quality agencies to reevaluate and reconfigure monitoring networks. A variety of factors contribute to these shifting monitoring objectives:

- Air quality has changed since adoption of the federal Clean Air Act and NAAQS. For example, the problems of high ambient concentrations of lead and carbon monoxide (CO) have largely been solved.

- Populations and behaviors have changed. For example, the US population has (on average) grown, aged, and shifted toward urban and suburban areas over the past four decades. In addition, rates of vehicle ownership and annual miles driven have increased.
- New air quality objectives have been established, including rules to reduce air toxics, $PM_{2.5}$, and regional haze.
- The understanding of air quality issues and the capability to monitor air quality have both improved. Together, the enhanced understanding and capabilities can be used to design more effective air monitoring networks.

Ambient air monitoring networks must be designed to meet three basic monitoring objectives. Each objective is equally important and must be considered individually.

1. **Provide air pollution data to the general public in a timely manner**. Data can be presented to the public in a number of ways, including air quality maps, newspaper articles or advertisements, internet sites, and as part of weather forecasts and public advisories.
2. **Provide support for determining compliance with ambient air quality standards and developing emissions control strategies**. Data from qualified monitors for NAAQS pollutants are used for comparing an area's air pollution levels against the NAAQS. Data from monitors of various types can be used in developing attainment and maintenance plans. Data from SLAMS, and especially the NCore station, are used to evaluate the regional air quality models used in developing emission strategies and to track effectiveness of air pollution abatement control measures. In monitoring locations near major air pollution sources, source-oriented monitoring data can provide insight into how well industrial sources are controlling their pollutant emissions.
3. **Provide support for air pollution research studies**. Air pollution data from the NCore multipollutant monitoring network can be used to supplement data collected by researchers working on health effects assessments and atmospheric processes or for monitoring methods development work.

To support the air quality management work indicated in the three basic air monitoring objectives, a network must be designed with a variety of monitoring site types. Monitoring sites must be capable of informing airshed managers about peak air pollution levels, typical levels in populated areas, air pollution transported into and outside of a city or region, and air pollution levels near specific emissions sources. The following list summarizes these site types:

- Maximum concentrations of air pollutants expected to occur in the area covered by the network
- Typical pollutant concentrations in areas of high population density
- Impact of significant sources or source categories on air quality
- General background concentration levels of air pollutants
- Extent of regional pollutant transport among populated areas and compliance with secondary air quality standards
- Air pollution impacts on visibility, vegetation damage, or other welfare-based impacts

The adequacy of an ambient air monitoring network may be determined by using a variety of tools, including the following:

- Federal monitoring requirements and network minimums
- Analyses of historical monitoring data
- Maps of pollutant emissions densities
- Dispersion modeling
- Special studies/saturation sampling
- SIP requirements
- Revised monitoring strategies (e.g., new regulations and reengineering of theair monitoring network)
- Network maps and network descriptions with site objectives defined
- Best professional judgment

The appropriate location of a monitor can only be determined on the basis of stated objectives. The following tools can help determine whether monitor locations are meeting their stated objectives:

- Maps, graphical overlays, and information based on geographic informationsystems, which are extremely helpful for visualizing the adequacy of monitorlocations
- Plots (graphs) of potential emissions levels and/or historical monitored levels of pollutants versus monitor locations
- Modeling or special studies (including saturation monitoring studies) may be appropriate for determining the adequacy of a particular monitorlocation

3 DEQ's Ambient Air Quality Monitoring Network

DEQ is responsible for operating and maintaining the ambient air monitoring network for Idaho. Some air monitors in Idaho are managed by tribal monitoring organizations on tribal lands. This document is limited to the monitors in the air monitoring network that are managed by DEQ (Figure 1).

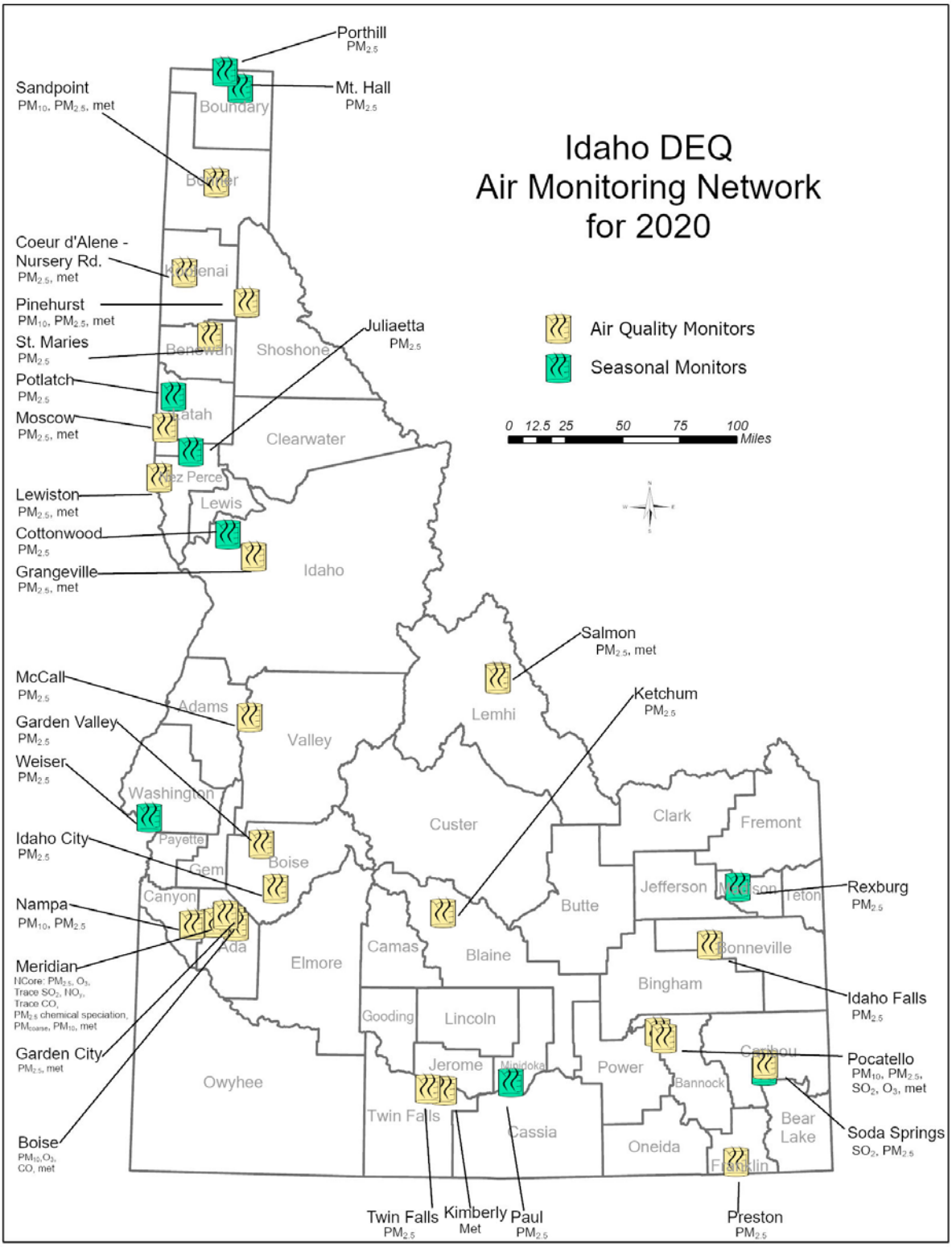


Figure 1. Idaho air quality monitoring network, 2020.

3.1 Monitoring Sites

On January 1, 2020, DEQ's SLAMS network consisted of 26 distinct monitoring sites measuring criteria pollutants and surface meteorology (Table 1). DEQ's ambient air quality monitoring network is operated and maintained by monitoring staff at DEQ's six regional offices.

Table 1. DEQ monitoring stations, locations, and AQS identification codes.

Site	Address	Latitude/Longitude	AQS Identification
Sandpoint—University of Idaho	U of I Research Center, 2105 N. Boyer Ave. Sandpoint, ID 83864	+48.291820/ - 116.556560	160170003
Coeur d'Alene—Nursery Rd.	3600 Nursery Rd., Coeur d'Alene, ID 83815	+47.715385/ -116.827245	160550015
Coeur d'Alene—LMP	Camp Cross, McDonald Point, Lake Coeur d'Alene, ID	+47.555253/ -116.817331	160550004
St. Maries	Forest Service Building, St. Maries, ID 83861	+47.316667/ -116.570280	160090010
Pinehurst	106 Church St., Pinehurst, ID 83850	+47.536389/ -116.236667	160790017
Moscow	1025 Plant Sciences Rd., Moscow, ID 83843	+46.728000/ -116.955667	160570005
Lewiston	1200 29th St., Lewiston, ID 83501	+46.408352/ -116.992533	160690012
Grangeville	US Forest Service Compound, Grangeville, ID 83530	+45.9274167/ -116.105944	160490002
McCall	500 N. Mission St., McCall, ID 83638	+44.542486/ -116.062358	160850002
Garden Valley	946 Banks Lowman Rd., Garden Valley, ID 83622	+44.104675/ -115.973084	160150002
Nampa—Fire Station	923 1st St. S., Nampa, ID 83651	+43.580310/ -116.562676	160270002
Meridian—St. Luke's	Eagle Rd and I-84, Meridian, ID 83642	+43.600699/ -116.347853	160010010
Boise—Eastman Garage	166 N. 9th, Boise, ID 83702	+43.616379/ -116.203817	160010014
Boise—Fire Station #5	16th and Front, Boise, ID 83702	+43.618889/ -116.213611	160010009
Boise—White Pine Elementary	401 E. Linden St., Boise, ID 83706	+43.577603/ -116.178156	160010017
Garden City	Ada County Fairgrounds, Garden City, ID 83714	+43.647819/ -116.269514	160010020
Idaho City	3851 Hwy 21, Idaho City, ID 83631	+43.823017/ -115.838557	160150001
Ketchum	111 West 8th St., Ketchum, ID 83340	+43.682558/ -114.371094	160130004
Twin Falls	650 W. Addison, Twin Falls, ID 83301	+42.56505/ -114.494767	160830007
Kimberly	50 Highway 50, Kimberly, ID 83341	+42.553325/ -114.354853	160830009

Site	Address	Latitude/Longitude	AQS Identification
Pocatello—Garrett and	Garrett and Gould, Pocatello, ID 83204	+42.876725/ -112.460347	160050015
Pocatello—Sewage Treatment Plant	Batiste Chubbuck Rd., Pocatello, ID 83204	+42.916389/ -112.515833	160050004
Preston	450 East 800 South., Preston, ID 83263	+42.08266/ -111.863297	160410002
Soda Springs	5-Mile Rd., Soda Springs, ID 83276	+42.695278/ -111.593889	160290031
Idaho Falls	Hickory and Sycamore St., Idaho Falls, ID 83402	+43.464700/ -112.046450	160190011
Salmon—Charles St.	N. Charles St., Salmon, ID 83467	+45.181893/ -113.890285	160590004

DEQ also uses seasonal monitors at nine locations for the state's Crop Residue Burning (CRB) Program (Table 2). This program oversees agricultural burning to limit smoke impacts, particularly to sensitive populations (i.e., schools and hospitals). Met One Instruments E-sampler $PM_{2.5}$ monitors are established in locations where agricultural burning typically takes place, and the monitors are strategically located at sensitive population properties to detect any smoke impacting those sites. Farmers are required to apply for permits before burning. E-sampler monitoring data, in addition to meteorological parameters, are analyzed to determine if transport characteristics are acceptable to allow for proper smoke dispersion, especially away from sensitive populations. The E-samplers are only active during the agricultural burning season and may only operate for about 2–5 months in any given year. As a result of these unique objectives and conditions, the data from these monitors is not submitted to EPA's AQS database.

Table 2. CRB Program station locations.

Site	County	Address or Location	Latitude/Longitude	Program Objective
Porthill	Boundary County	Tavern Farm Rd., Porthill, ID 83853	+48.995911/ -116.509953	Smoke Management
Mt. Hall	Boundary County	1275 Idaho 1, Bonners Ferry, ID 83805	+48.894014/ -116.359381	Smoke Management
Cottonwood	Idaho County	BLM Field Office, 1 Butte Dr., Cottonwood, ID 83522	+46.06319/ -116.34824	Smoke Management
Potlatch	Latah County	510 Elm St., Potlatch, ID 83855	+46.92106/ -116.89627	Smoke Management
Juliaetta	Latah County	3rd Street, Juliaetta, ID 83535	+46.578731/ -116.708958	Smoke Management
Weiser	Washington County	690 W. Indianhead Rd., Weiser, ID 83672	+44.261694/ -116.979172	Smoke Management
Paul	Minidoka County	201 N. 1st Street West, Paul, ID 83347	+42.6078167/ -113.786817	Smoke Management
Soda Springs—Caribou Hospital	Caribou County	Caribou Hospital, 300 South 3rd Street West, Soda Springs, ID 83276	+42.651670/ -111.614720	Smoke Management
Rexburg	Madison County	Madison Middle School, 575 W. 7th Street. Rexburg, ID 83440	+43.809486/ -111.800475	Smoke Management

3.2 DEQ Monitoring Network—Monitoring Purpose, Scale of Representativeness, and Area Represented

The ambient air quality and meteorological data collected from DEQ's network is used for a variety of purposes, including the following:

- Determining compliance with the NAAQS
- Determining the locations of maximum pollutant concentrations
- Forecasting air quality to determine the AQI
- Providing early detection of smoke impacts (smoke management)
- Determining the effectiveness of air pollution control programs
- Evaluating the effects of air pollution levels on public health
- Tracking the progress of air quality-related SIPs
- Supporting pollutant dispersion models
- Developing responsible, cost-effective air pollution control strategies
- Analyzing air quality trends

Spatial scale of representativeness is used to clarify the link between general monitoring objectives, site types, and the physical location of a particular monitor. The goal in locating monitors is to correctly match the spatial scale represented by the sample of monitored air with the spatial scale most appropriate for the monitoring site type, air pollutant measured, and monitoring objective. Spatial scale of representativeness is described by the physical dimensions of the air parcel nearest to a monitoring site throughout which actual pollutant concentrations are reasonably similar. The scales of interest for the monitoring site types described above are as follows:

- ***Microscale***—Defines the concentrations in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
- ***Middle scale***—Defines the concentrations typical of areas up to several city blocks in size with dimensions ranging from about 100 to 500 meters.
- ***Neighborhood scale***—Defines concentrations within some extended area of the city that has relatively uniform land use with dimensions in the range of 0.5–4.0 kilometers.
- ***Urban scale***—Defines concentrations within an area of city-like dimensions, on the order of 4–50 kilometers. Within a city, the geographic placement of emissions sources may result in no single site that represents air quality on an urban scale. The neighborhood and urban scales may potentially overlap in applications concerning secondarily formed or homogeneously distributed air pollutants.
- ***Regional scale***—Defines an area that is usually rural, is of reasonably homogeneous geography without large emissions sources, and extends from tens to hundreds of kilometers.
- ***National and global scales***—These measurement scales represent concentrations characterizing a nation or the globe as a whole.

Properly siting a monitor requires specifying the monitoring objective, types of sites necessary to meet the objective, and desired spatial scale of representativeness. For example, consider a case where the objective is to determine NAAQS compliance by understanding the maximum ozone concentrations for an area. Candidate areas would most likely be located downwind of a metropolitan area, probably in suburban residential areas where children and other susceptible

individuals are likely to be outdoors. Sites in such areas are most likely to represent an urban scale of measurement. In this example, physical location would be determined by considering ozone precursor emission patterns, public activity, and meteorological characteristics affecting ozone formation and dispersion. Spatial scale of representativeness would not be used in the selection process but would be a result of site location.

In some cases, the physical location of a site is determined from jointly considering both the basic monitoring objective and the type of monitoring site desired or required. For example, to determine typical $PM_{2.5}$ concentrations over a geographic area that has relatively high $PM_{2.5}$ concentrations, a neighborhood scale site is most appropriate. Such a site would likely be located in a residential or commercial area having a high overall $PM_{2.5}$ emission density but not in the immediate vicinity of any single dominant source. In this example, the desired scale of representativeness would be an important factor in determining the physical location of the monitoring site.

In either case, classification of the monitor by its type and spatial scale of representativeness is necessary and will aid in interpreting the monitoring data for a particular monitoring objective (e.g., public reporting, NAAQS compliance determination, or research support).

Table 3 illustrates the relationship between the various site types and is used to support the three basic monitoring objectives and scales of representativeness most appropriate for each site type.

Table 3. Relationships between site types and scales of representativeness.

Site Type	Appropriate Siting Scales
Maximum concentration	Micro, middle, neighborhood (*sometimes* urban or regional for secondarily formed pollutants)
Population oriented	Neighborhood, urban
Source impact	Micro, middle, neighborhood
General/background	Urban, regional
Regional transport	Urban, regional
Welfare-related impacts	Urban, regional

Federal ambient air monitoring regulations use the statistical-based definitions for metropolitan areas provided by the Office of Management and Budget and the Census Bureau. These areas are referred to as metropolitan statistical areas or micropolitan statistical areas—both of which are CBSAs—and CSAs. A CBSA associated with at least one urbanized area of 50,000 individuals or more is termed an MSA. A CBSA associated with at least one urbanized cluster of at least 10,000 individuals or more is termed a micropolitan statistical area. A CSA consists of two or more adjacent CBSAs.

By definition, both MSAs and CSAs have a high degree of integration; however, many such areas cross state or other political boundaries. An MSA or CSA may also cross more than one airshed. EPA recognizes that state or local agencies must consider MSA/CSA boundaries and their own political boundaries and geographical characteristics in designing their air monitoring networks. EPA also recognizes there may be situations where the EPA regional administrator and the affected state or local agencies may need to augment or divide the overall MSA/CSA monitoring responsibilities and requirements among these various agencies to achieve an effective network design. Full monitoring requirements apply separately to each affected state or

local agency in the absence of an agreement between the affected agencies and the EPA regional administrator.

3.3 Monitoring Methods, Monitor Designation, and Sampling Frequency

Monitoring methods used for making NAAQS compliance determinations at a SLAMS site must be designated FRM or FEM according to 40 CFR 53. A method for monitoring $PM_{2.5}$ concentrations that has not been designated as an FRM or FEM may be approved as an ARM by the EPA regional administrator. SPMs may include FRM- and FEM-level monitors as well as other monitors typically used for special studies or as surrogate measures or indicators of emergency episodes (e.g., beta attenuation monitors [BAMs] used for early detection of smoke).

Table 4 lists monitoring methods used by DEQ along with associated method codes required when submitting the monitoring data to EPA's AQS database. Method codes for meteorological parameters are not included in the table.

Table 4. Air monitoring method codes.

Parameter/ Pollutant	Method Designation	AQS Method Code	Instrument and Instrument Parameters
PM_{10}	FEM	079	TEOM—gravimetric analysis, instrumental—R&P SA246B inlet Met One Beta Gauge (BAM)
	FEM	122	
PM_{10}	FRM	127	Thermo/R & P 2025 sequential PM_{10}
CO	FRM	593[b]	Teledyne API Model 300EU or T300U
	FEM	093	Teledyne API Model T300
SO_2	FEM	100	Teledyne API Model T100
	FRM	600	Teledyne API Model 100EU or T100U
O_3	FEM	087	Teledyne API, Model 400E or T400
NO_2	FRM	099	Teledyne API, Model 200E
	FEM	200	Teledyne API Model T200UP
	FEM	599	Teledyne API, Model 200EU
NO_y	FEM	699[a]	Teledyne API, Model 200EU or T200U
$PM_{2.5}$	FRM	145	R&P Model 2025 sequential w/ VSCC
	FRM	545	Met One E-SEQ-FRM w/VSCC
$PM_{2.5}$	NA	731	Met One Beta Gauge (BAM) w/ SCC
$PM_{10-2.5}$	FRM	176	Thermo Scientific Partisol-Plus Model 2025 Sequential Sampler Pair w/ VSCC

a. Trace gas monitor – NCore

Notes: BAM = beta attenuation monitor, CO = carbon monoxide, FEM = federal equivalent method, FRM = federal reference method, NO_2 = nitrogen dioxide, NOy = total reactive nitrogen, O_3 = ozone, $PM_{2.5}$ = particulate matter less than 2.5 µ in diameter, PM_{10} = particulate matter less than 10 µ in diameter, $PM_{10-2.5}$ = particulate matter in between 2.5 and 10 µ in diameter, SCC = sharp cut cyclone, SO_2 = sulfur dioxide, SPM = special purpose monitor, TEOM = tapered element oscillating microbalance, VSCC = very sharp cut cyclone

Monitoring sites designated as SLAMS are intended to address specific air quality management interests and are frequently single-pollutant measurement sites. The SLAMS sites must be approved by the EPA regional administrator.

Monitoring sites designated as SPMs in the annual network plan and AQS do not count toward meeting network minimum requirements. SPM sites using methods designated as FRMs or FEMs or approved as ARMs are bound to the quality assurance requirements of 40 CFR 58 Appendix A. The SPMs in DEQ's network provide continuous particulate matter concentrations for posting to the AQI, supporting the CRB Program, and monitoring episodic events. The BAMs are configured with a sharp cut cyclone (SCC) and do not meet FEM designation requirements and are operated as SPMs in the network.

Gaseous pollutants and meteorological parameters are sampled continuously and typically averaged for each hour. Data completeness for a continuous monitor is computed as the number of valid hourly samples collected divided by the number of potential hourly samples for the period in question (e.g., 8,760 potential hourly samples annually).

Particulate matter can be sampled continuously or by time-integrated, filter-based methods. Filter-based methods typically collect samples for 24-hour periods. For NAAQS comparison, particulate matter data are reported as a 24-hour average, collected from midnight to midnight at local standard time. The minimum monitoring schedule for a $PM_{2.5}$ site is based on the type of monitor, monitor's objectives, and design value (relative to the 24-hour NAAQS) determined for the monitored site (Figure 2).

For the monitors in DEQ's ambient air quality monitoring network, Table 5 lists a variety of parameters associated with the monitors and information used in reporting data to the AQS.

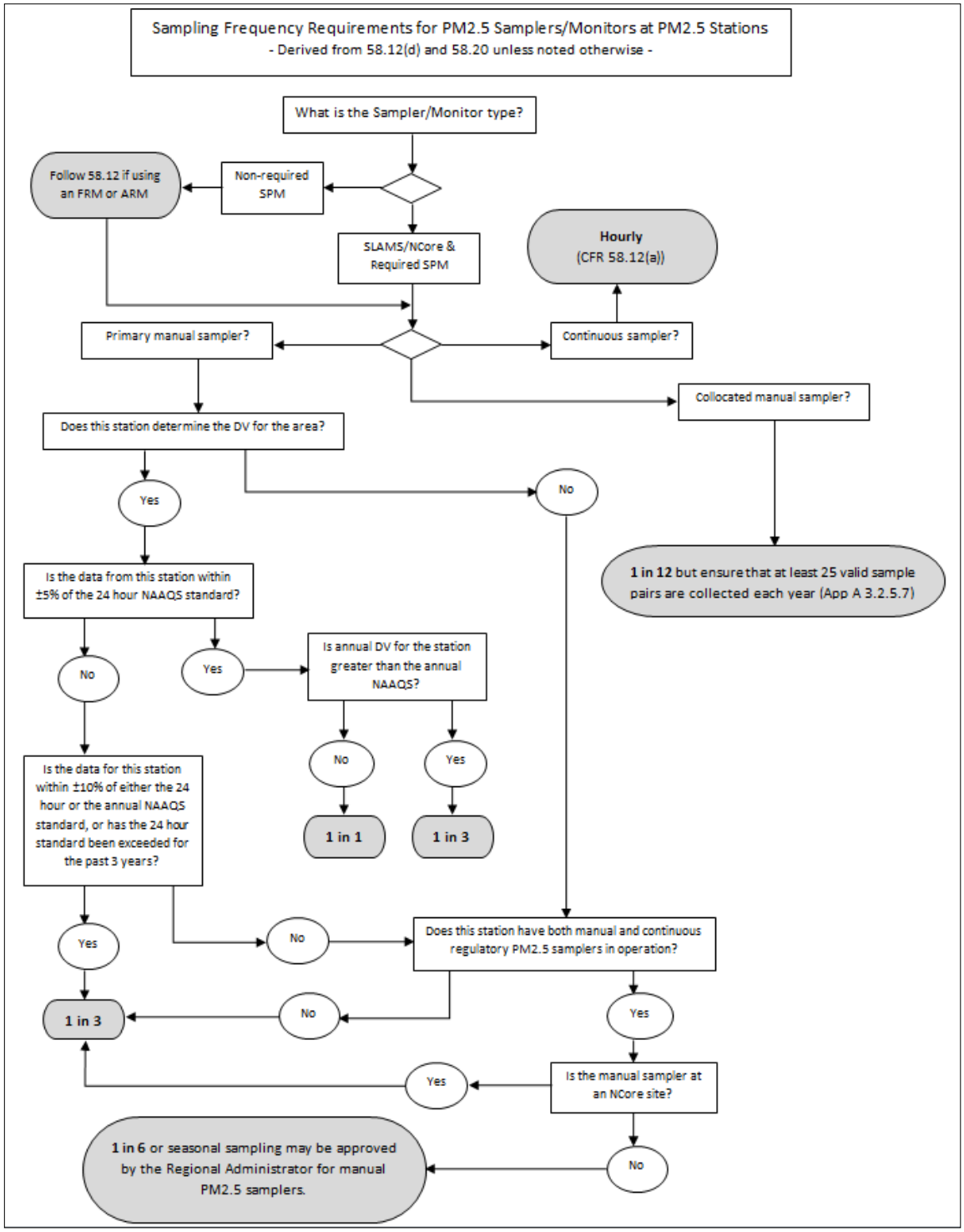


Figure 2. Minimum monitoring frequency based on ratio of local concentration to standard (DV = design value).

Table 5 summarizes the monitoring purpose, area represented, and monitoring scale of representativeness for DEQ's FRM, FEM, and SPM year-round monitors.

Table 5. Monitoring site summaries.

Site Information					Monitor Information							Regulatory and Program Objectives
MSA/County	**2019 Est. Pop.**	**Site Name**	**AQS Identification**	**Scale**	**Pollutant**	**Begin Date**	**Designation**	**Frequency**	**AQS Method Code**	**Parameter Code**	**POC #**	
Metropolitan Statistical Areas												
Logan UT-ID	142,165	Preston	160410002	Neighborhood	$PM_{2.5}$—FRM	2017	SLAMS	1/1	145	88101	1	Complies with $PM_{2.5}$ NAAQS Requirements [a], $PM_{2.5}$ SIP
					$PM_{2.5}$—BAM 1020	2018	SPM	Continuous	731	88502	3	AQI, smoke management
Boise City—Nampa	749,202	Nampa—Fire Station	160270002	Neighborhood	PM_{10}—BAM 1020	2000	SLAMS	Continuous	122	81102	2	Complies with PM_{10} NAAQS Requirements [a].
					$PM_{2.5}$—FRM	2008	SLAMS	1/1	145	88101	1	Complies with $PM_{2.5}$ NAAQS Requirements [a].
					$PM_{2.5}$—BAM 1020	2015	SPM	Continuous	731	88502	3	AQI
		Meridian—St. Luke's	160010010	Neighborhood	$PM_{2.5}$—FRM	2006	NCore	1/3	145	88101	1	NCore—trace gas, NCore—$PM_{10\text{-}2.5}$, $PM_{2.5}$ NAAQS, $PM_{2.5}$ chemical speciation, O_3 NAAQS, AQI, meteorological [b], NO_2
					$PM_{2.5}$—BAM 1020	2016	SP0M	Continuous	731	88502	7	
					$PM_{2.5}$ Chemical Speciation	2006	NCore	1/3			5	
					$PM_{10\text{-}2.5}$	2011	NCore	1/3	176	86101	1	
					O_3	2007	NCore	Continuous	87	44201	1	
					SO_2	2009	NCore	Continuous	600	42401	1,2	
					NO_y	2009	NCore	Continuous	699	42600 42601 42601	1 3 1	
					CO	2009	NCore	Continuous	593	42101	1	
					PM_{10}	2011	NCore	1/3	127	85101	1	
					$PM_{2.5}$—FRM	2013	Precision [c]	1/6	145	88101	2	
		Boise—Eastman Garage	160010014	Micro	CO	1993	SLAMS	Continuous	093	42101	1	Required as per Northern Ada County SIP
		Boise—Fire Station #5	160010009	Neighborhood	PM_{10}—BAM 1020	1999	SLAMS	Continuous	122	81102	3	PM_{10} SIP, Complies with PM_{10} NAAQS requirements, AQI, smoke management
		Garden Valley	160150002	Urban	$PM_{2.5}$—BAM 1020	2001	SPM	Continuous	731	88502	3	AQI, smoke management
		Idaho City	160150001	Neighborhood	$PM_{2.5}$—BAM 1020	2000	SPM	Continuous	731	88502	4	AQI, Smoke Management
		Boise—White Pine Elementary	160010017	Neighborhood	O_3	2009	SLAMS	Continuous	087	44201	1	Complies with O_3 NAAQS Requirements [a]
		Garden City	160010020	Neighborhood	$PM_{2.5}$—BAM 1020	2019	SPM	Continuous	731	88502	3	AQI, smoke management
Coeur d'Alene	165,697	Coeur d'Alene—Nursery Rd.	160550015	Urban	$PM_{2.5}$—BAM 1020	2019	SPM	Continuous	731	88502	3	AQI, smoke management, meteorological [b]
Idaho Falls	151,530	Idaho Falls	160190011	Neighborhood	$PM_{2.5}$—BAM 1020	2015	SPM	Continuous	731	88502	4	AQI, smoke management
Twin Falls	111,290	Twin Falls	160830007	Neighborhood	$PM_{2.5}$—BAM 1020	2016	SPM	Continuous	731	88502	3	AQI, smoke management
Lewiston	62,990	Lewiston	160690012	Neighborhood	$PM_{2.5}$—BAM 1020	2016	SPM	Continuous	731	88502	4	AQI, smoke management, meteorological [b]
Pocatello	95,489	Pocatello—Garrett and Gould	160050015	Neighborhood	$PM_{2.5}$—BAM 1020	2015	SPM	Continuous	731	88502	4	AQI, smoke management, meteorological [b]
					PM_{10}—BAM 1020	2001	SLAMS	Continuous	122	81102	3	Complies with PM_{10} SIP requirements
					O_3	2020	SPM	Continuous	087	44201	1	AQI, regional ozone monitoring and modeling support.
		Pocatello—Sewage Treatment	160050004	Middle	SO_2	1981	SLAMS	Continuous	100	42401	2, 4	SO_2 NAAQS
Micropolitan Statistical Areas												
Hailey	24,127	Ketchum	160130004	Urban	$PM_{2.5}$—BAM 1020	2009	SPM	Continuous	731	88502	3	AQI, smoke management
Moscow	40,108	Moscow	160570005	Urban	$PM_{2.5}$—BAM 1020	2016	SPM	Continuous	731	88502	4	AQI, smoke management, meteorological [b]

Site Information					Monitor Information							Regulatory and Program Objectives
MSA/County	2019 Est. Pop.	Site Name	AQS Identification	Scale	Pollutant	Begin Date	Designation	Frequency	AQS Method Code	Parameter Code	POC #	
Sandpoint	45,739	Sandpoint	160170003	Neighborhood	PM_{10}—BAM 1020	2013	SLAMS	Continuous	122	81102	3	Complies with PM_{10} SIP, Complies with PM_{10} NAAQS requirements, AQI, smoke management, meteorological [b]
					$PM_{2.5}$—BAM 1020	2015	SPM	Continuous	731	88502	3	AQI, smoke management
County Monitors												
Shoshone		Pinehurst	160790017	Neighborhood	$PM_{2.5}$—FRM	1999	SLAMS	1/1	145	88101	1	Complies with $PM_{2.5}$ NAAQS requirements, meteorological [b]
					$PM_{2.5}$—BAM 1020	2014	SPM	Continuous	731	88502	4	AQI, smoke management
					PM_{10}—BAM 1020	1998	SLAMS	Continuous	122	81102	3	Complies PM_{10} SIP and PM_{10} NAAQS,
Benewah		St. Maries	160090010	Neighborhood	$PM_{2.5}$—FRM	2003	SLAMS	1/1	545	88101	1	Complies with $PM_{2.5}$ NAAQS requirements
					$PM_{2.5}$—FRM	2018	Precision[c]	1/6	545	88101	2	$PM_{2.5}$ Instrument Collocation
					$PM_{2.5}$—BAM 1020	2014	SPM	Continuous	731	88502	3	AQI, smoke management
Idaho		Grangeville	160490002	Neighborhood	$PM_{2.5}$—BAM 1020	2001	SPM	Continuous	731	88502	4	AQI, smoke management, meteorological [b]
Valley		McCall	160850002	Urban	$PM_{2.5}$—BAM 1020	2017	SPM	Continuous	731	88502	4	AQI, smoke management
Lemhi		Salmon—Charles St.	160590004	Neighborhood	$PM_{2.5}$—FRM	2003	SLAMS	1/3	145	88101	1	Complies $PM_{2.5}$ NAAQS, meteorological [b]
					$PM_{2.5}$—BAM 1020	2009	SPM	Continuous	731	88502	4	AQI, smoke management
Caribou		Soda Springs	160290031	Middle	SO_2	2000	SLAMS	Continuous	100	42401	1, 2	Complies with SO_2 NAAQS

a. See Appendix D for minimum monitoring requirements.
b. Meteorological parameters are listed in section 3.3, Table 4.
c. Based on the FRM monitor and method counts, the network is required to operate two collocated monitors. These monitors fulfill this requirement.
Notes: AQI = air quality index , BAM = beta attenuation monitor, CO = carbon monoxide, FRM = federal reference method, NO = nitric oxide, NO_2 = nitrogen dioxide, NO_x = nitrogen oxides, NO_y = total reactive nitrogen, O_3 = ozone, MSA = metropolitan statistical area, NAAQS = National Ambient Air Quality Standard, $PM_{2.5}$ = particulate matter less than 2.5 µ in diameter, PM_{10} = particulate matter less than 10 µ in diameter, $PM_{10\text{-}2.5}$ = particulate matter in between 2.5 and 10 µ in diameter, POC = parameter occurrence code SIP = state implementation plan, SO_2 = sulfur dioxide.

DEQ currently operates twelve 10-meter meteorological stations. Meteorological measurements are used to support AQI forecasting and air quality modeling analyses. Data collected from DEQ's meteorological stations are submitted to the AQS.

Table 6 provides a list of parameters measured at DEQ meteorological stations. DEQ operates the meteorological monitoring network according to EPA's 2008 *Quality Assurance Handbook for Air Pollution Measurement Systems Volume IV: Meteorological Measurements Version 2.0 (Final).*

Table 6. DEQ meteorological monitoring stations and parameters.

Site	Meteorological Parameters Monitored							
	2-meter Temp. (°C)	10-meter Temp. (°C)	Barometric Pressure (mbar)	Relative Humidity (%)	Wind Direction (degrees)	Wind Speed (m/s)	Solar Radiation (Watt/m^2)	Precipitation (·ain, ınches)
Sandpoint—University of Idaho	X	X	X	X	X	X	X	X
Pinehurst	X	X	X	X	X	X	X	X
Coeur d'Alene—LMP	X	X	X	X	X	X	X	X
Coeur d'Alene—Nursery Rd.	X	X	X	X	X	X	X	X
Moscow	X	X	X	X	X	X	X	X
Lewiston	X	X	X	X	X	X	X	X
Grangeville	X	X	X	X	X	X	X	X
Meridian—St. Luke's	X	X	X	X	X	X	X	N/A
Garden City	X	X	X	X	X	X	X	N/A
Kimberly	X	X	X	X	X	X	X	N/A
Pocatello—Garrett and Gould	X	X	X	X	X	X	X	X
Salmon—Charles St.	X	X	X	X	X	X	X	N/A

Notes: m/s = meter per second, mbar = millibar, Watt/m^2 = watt per square meter, N/A = parameter not monitored, X = monitored parameter

4 DEQ Network Modifications Subsequent to EPA-Approved 2019 Ambient Monitoring Network Plan

The following network modifications were made after EPA approved the 2019 annual network plan. Modifications proposed and implemented after the 2019 plan and before DEQ submitted this 2020 plan have been addressed on a case-by-case basis and communicated through email and mail, when necessary. Applicable documentation is included in Appendix C.

- Replaced the remaining Thermo Scientific 1400AB PM_{10} monitors with BAM 1020 PM_{10} monitors. In 2019, BAM 1020 monitors were deployed at the Boise-Fire Station #5 and Sandpoint sites.

- Replaced the 2025 FRM $PM_{2.5}$ monitor at Pinehurst with Met One Instrument's E-SEQ- FRM $PM_{2.5}$ monitor.
- Removed the collocated 2025 FRM PM_{10} precision monitor at the St. Luke's site. Collocated PM_{10} monitoring for coarse measurements is no longer a regulatory requirement.
- To address power and access concerns at the Soda Springs location, the E-Sampler$PM_{2.5}$ SPM was relocated from a rooftop location to an adjacent ground-level location.
- The eastern Idaho ozone modeling and assessment was completed. The Garrett and Gould site in Pocatello was selected for DEQ's ozone monitoring efforts in eastern Idaho. The monitoring equipment was procured, and site improvements and staff training were completed. Sampling began April 1, 2020.
- Relocated the BAM 1020 $PM_{2.5}$ SPM monitor from the Lancaster site to the new site in Coeur d'Alene (Nursery Road).
- Changed the sampling frequency of the 2025 FRM $PM_{2.5}$ monitor at the Nampa Fire Station site to 1:1.
- Deployed a BAM 1020 $PM_{2.5}$ SPM at the Garden City monitoring site.
- DEQ sought and received a waiver from EPA from operating an ozone monitor in the Logan UT-ID MSA.

5 Network Description and Modifications

DEQ's rationale for proposing network modifications (if any) for each monitored pollutant is provided below with a summary of the proposed changes. Annual air quality data summaries for DEQ's air monitoring network are found at *www.deq.idaho.gov/air-quality/monitoring/monitoring-network*. More information about criteria pollutants (those pollutants for which EPA has established NAAQS) and NAAQS is found at *https://www.epa.gov/criteria-air-pollutants*.

5.1 PM_{10} Monitoring Network

Five PM_{10} monitoring sites are currently operating. These monitors support local SIP efforts and/or PM_{10} maintenance plans by assessing compliance with the PM_{10} NAAQS and will continue operating through 2020. Monitoring in these areas is required to demonstrate attainment of the appropriate NAAQS. The AQS identification for the corresponding, DEQ-operated monitor is provided with the airshed description.

The PM_{10} monitoring locations are selected to represent average population exposure to spatially representative concentrations in the middle, neighborhood, and urban scales.

The following airshed is designated as moderate nonattainment for the 24-hour PM_{10} NAAQS (150 micrograms per cubic meter [µg/m³]):

- Fort Hall Reservation (Bannock County—partial, Power County—partial)

The Fort Hall Reservation nonattainment area is on tribal land and is not administered by DEQ.

The following airsheds are classified as attainment with a maintenance plan and require monitoring to demonstrate compliance with a specific PM_{10} NAAQS over specific time frames:

- Boise-Northern Ada County (AQS ID 160010009)
- Portneuf Valley (Bannock County—partial, Power County—partial) (AQS ID 160050015)

The following airsheds are designated as attainment with a limited maintenance plan for the 24-hour PM_{10} NAAQS (150 µg/m³):

- Shoshone County—partial (excluding Pinehurst)
- Bonner County—partial (city of Sandpoint) (AQS ID 160170003)
- Pinehurst (Shoshone County— partial [city of Pinehurst]) (AQS ID 160790017)

For more information on area designations of Idaho's airsheds, visit *www.epa.gov/green-book*. The PM_{10} design values for 2017–2019 are listed in Appendix A.

2020 Modifications

- DEQ was notified by the University of Idaho (site property owners) that the land currently occupied by the Sandpoint monitoring site had been sold. DEQ is reviewing alternative site locations in the area to relocate the monitors.
- Local changes in site operations at the Nampa Fire Station site could impact PM_{10} concentrations in the future. DEQ is searching for an alternative site in the MSA. As a SLAMS site, DEQ will coordinate any site relocation with EPA Region 10.

5.2 $PM_{2.5}$ Core NAAQS Compliance Monitoring Network

DEQ operates a core network of six $PM_{2.5}$ monitoring sites for NAAQS compliance. DEQ began monitoring $PM_{2.5}$ by FRM in 1998 with an initial network of 13 sites. Over time, the network has been reduced due to site redundancy within airsheds or overall low ambient concentrations relative to the NAAQS. The following six sites remain:

- Pinehurst
- St. Maries
- Treasure Valley (Nampa Fire Station)
- Treasure Valley (Meridian St. Luke's)
- Salmon
- Preston

Federal regulations require a minimum of two $PM_{2.5}$ monitoring sites in the Treasure Valley (Boise City MSA), based on population. The Meridian St. Luke's monitor also satisfies the requirement for $PM_{2.5}$ monitoring at NCore sites.

The West Silver Valley (WSV) airshed (including Pinehurst) is designated a moderate nonattainment area for the annual $PM_{2.5}$ NAAQS (12 µg/m³). A clean data determination for the WSV 2012 annual $PM_{2.5}$ NAA was effective on January 22, 2019. Part of Franklin County in the Logan UT-ID NAA is classified nonattainment for the 24-hour $PM_{2.5}$ NAAQS (35 µg/m³). A clean data determination for the Logan, UT-ID 2006 24-hour $PM_{2.5}$ NAA was effective on October 19, 2018.

$PM_{2.5}$ design values (updated for 2017–2019) and current and proposed sampling frequencies are listed in Appendix A. Table A2 presents data obtained from FRM monitors.

Since submitting prior annual network plans, the EPA has asked DEQ to provide additional information we used to relocate the Franklin monitor to Preston. These documents are referenced below and can be found in Appendix C of this plan. In anticipation of being evicted from the Franklin monitoring site (see Amendment to Funding Agreement), DEQ installed an FRM monitor in Preston. The monitor started collecting samples in early 2017. Prior to this, DEQ's GIS analyst assisted in identifying land types and ownership in and around the Franklin area (see Potential New Sites for Franklin Monitor). The focus was on areas that were similar in elevation to the Franklin site and also near the Idaho/Utah border. The City of Franklin was not in favor of DEQ using any city land. State land was extremely limited, and there was no private or federal land available. After an exhaustive search, DEQ chose Preston, which is only about 5.5 miles from Franklin with very similar elevation and topography (see Topography Map).

DEQ believes Preston is a better site than Franklin in many regards:
1. The Preston site represents population exposure on a significantly larger scale. From the 2010 census, Franklin had a population of 641 vs. Preston's 5,204.
2. The Preston site is additionally located at a school and near a hospital, thereby protecting and representing sensitive populations. The Franklin site was located at a waste water plant. Ongoing construction activity at the Franklin site made air quality monitoring difficult.
3. Due to its location at a school, the Preston site also provides the opportunity for air quality educational outreach to the students and also the greater community. DEQ has leveraged this opportunity several times already in the short time the monitors have been at Preston, and it has been well received by the students and the community.

DEQ was also keenly aware of previous studies that found that $PM_{2.5}$ concentrations, especially during inversion episodes of interest, were quite uniform between sites such as Franklin and Preston. This lended further support in relocating the monitor to Preston.

In an effort to continue to meet minimum monitoring requirements the EPA has additionally asked that DEQ sign a Memorandum of Understanding (MOU) with the Utah Department of Environmental Quality (see Appendix C). This MOU simply reinforces that monitoring requirements for the MSA will be jointly met by the two agencies.

2020 Modifications

- Continue to replace the existing 2025 FRM $PM_{2.5}$ monitors with Met One Instrument's E- SEQ-FRM $PM_{2.5}$monitors at all the current 2025 FRM sites. The 2025 FRM monitors were discontinued and are no longer supported by the manufacturer.
- Local changes in site operations at the Nampa Fire Station site could impact $PM_{2.5}$ concentrations in the future. DEQ has begun searching for an alternative site in the MSA. As a SLAMS site, DEQ will coordinate any site relocation with EPA Region 10.

5.3 $PM_{2.5}$ Continuous Monitoring Network

DEQ performs continuous $PM_{2.5}$ year-round monitoring at 18 sites throughout the state using Met One BAM 1020 $PM_{2.5}$ monitors. The real-time and continuous $PM_{2.5}$ data support DEQ's air quality forecasting, AQI, and smoke management programs. These monitors are configured as
special purpose, non-NAAQS monitors.

The $PM_{2.5}$ continuous monitors are located at these monitoring sites:

- Sandpoint—University of Idaho
- Coeur d'Alene—Nursery Road
- St. Maries
- Pinehurst
- Moscow
- Lewiston
- Grangeville
- McCall
- Garden City
- Idaho City
- Nampa—Fire Station
- Meridian—St. Luke's
- Ketchum
- Twin Falls
- Pocatello—Garrett and Gould
- Preston
- Idaho Falls
- Salmon

A BAM $PM_{2.5}$ SPM is needed to assess wildfire smoke impacts and winter time inversion conditions in and around the downtown Boise area while providing an AQI for the community. A BAM $PM_{2.5}$ SPM was deployed to the existing Garden City site in 2019. A site more representative of smoke impacts along the Boise River drainage and more centrally located in the population center of the Boise area has been identified on the BSU campus. DEQ is working with BSU officials to relocate the monitor there in 2020.

DEQ also uses Met One E-Samplers as seasonal SPMs at nine locations to support the state's CRB Program (Table 2).

2020 Modifications

- Local changes in site operations at the Nampa Fire Station site could impact $PM_{2.5}$ concentrations in the future. DEQ is searching for an alternative site in the MSA.
- DEQ was notified by the University of Idaho (site property owners) that the land currently occupied by the Sandpoint monitoring site has been sold. DEQ is reviewing alternative site locations in the area to relocate the monitors.
- Relocate the BAM 1020 located at the Garden City site to a new location on the BSU campus.
- Local property modifications and new buildings adjacent to the Ketchum site are impacting the monitor. DEQ will relocate the existing BAM $PM_{2.5}$ SPM in Ketchum to a new site at the Hailey Fire Station in Hailey.

5.4 Ozone Monitoring Network

DEQ currently operates three ozone monitors, two in the Treasure Valley and one in Pocatello. Federal regulations require two ozone monitors in an urban area or MSA the size of the Boise

City–Nampa MSA. One site must be designed to record the maximum concentration for the MSA. NCore sites can be counted toward minimum SLAMS ozone network requirements. Ozone is monitored during the ozone season as prescribed in 40 CFR 58 Appendix D. The ozone season in Idaho is April 1 through September 30.

The Treasure Valley ozone monitors are located at the following sites:

- Meridian St. Luke's NCore site near the Meridian St. Luke's Hospital
- White Pine Elementary site in southeastern Boise

DEQ began monitoring at the White Pine Elementary site in 2009 when it had to relocate the Whitney Elementary School site, which was demolished in 2008. The White Pine Elementary site was chosen based on evidence that it would represent the maximum ozone concentration for the Boise City–Nampa MSA.

The eastern Idaho ozone modeling and assessment was completed in 2019. This analysis suggested that the Pocatello MSA may contain some of the higher concentration gradients in eastern Idaho and is DEQ's first priority for ozone monitoring. Concentrations in other MSAs and locations were more influenced by nonanthropogenic sources, such as biogenic emissions and high elevation. The Garrett and Gould site in Pocatello has been selected as the location for DEQ's upcoming ozone monitoring efforts in eastern Idaho. Seasonal sampling is currently underway for the 2020 season. The requirement to install a SLAMS ozone monitor in the Idaho Falls MSA has been postponed through the end of calendar year 2023. EPA and DEQ will review the available Idaho ozone monitoring data for calendar years 2020 and 2021. EPA intends to notify DEQ through the 2022 network plan approval if DEQ is required to establish an ozone monitoring station in the Idaho Falls MSA.

In previous network plans, the EPA noted Idaho does not operator an ozone monitor in the Logan UT-ID MSA as required by regulations. As a part of DEQ's bigger Eastern Idaho analysis, IDEQ looked at the Logan UT-ID MSA and discussed whether an ozone monitor was warranted on the Idaho side of this MSA. The Utah/Cache Valley side contains the urban core of the MSA with the vast majority of the emission sources; less than 10% of the population resides on the Idaho side; and the ozone concentrations decrease north as you enter Idaho. As a result, IDEQ concludes that an additional monitor is not necessary at this time and thereby sought and received a waiver from monitoring on the Idaho side of the Logan UT-ID MSA. Modeling results and a copy of the waiver are provided in Appendix C.

Ozone design values for 2017–2019 are listed in Appendix A.

2020 Modifications

- DEQ proposes no changes to the O_3 monitoring network.

5.5 Carbon Monoxide Monitoring Network

Monitoring for CO in the Treasure Valley began in 1977. Violations of the health-based standard for CO occurred every winter from 1977 until 1986, and as a result, Northern Ada County was designated a CO nonattainment area by EPA. In December 2002, the *Northern Ada County CO Maintenance Plan* was approved by EPA, which reclassified the area as attainment with a maintenance plan for the CO NAAQS. No exceedances of the CO NAAQS have occurred since 1991.

DEQ operates two CO monitors: the Boise Eastman Garage site in downtown Boise and the

Meridian St. Luke's NCore site. The Boise Eastman Garage site is an urban canyon site designed to measure maximum concentrations to which the population is exposed. This site is needed to demonstrate NAAQS compliance as specified in the *Northern Ada County CO Maintenance Plan*. The Meridian St. Luke's CO monitor is a trace level monitor, capable of measuring much lower CO than conventional CO monitors used for NAAQS compliance. The Meridian St. Luke's CO monitor is required for NCore sites.

The CO (1-hour and 8-hour) design values for 2017–2019 are listed in Appendix A.

2020 Modifications

- DEQ proposes no changes to the CO monitoring network.

5.6 Sulfur Dioxide Monitoring Network

Three sulfur dioxide (SO_2) monitors currently operate in Idaho:

- Pocatello—Sewage Treatment Plant (STP)
- Soda Springs
- Meridian—St. Luke's

The Pocatello STP site is a maximum concentration site used to assess impacts of local industrial emissions. The Soda Springs monitor is also a maximum concentration site for assessing industrial impacts from a nearby source. Both SO_2 monitoring locations in southeastern Idaho were identified as fence-line hot spots from conventional dispersion model applications.

The Meridian St. Luke's monitor is a trace-level monitor required for NCore monitoring. The SO_2 design values for 2017–2019 are listed in Appendix A.

2020 Modifications

- DEQ proposes no changes to the SO_2 monitoring network.

5.7 Nitrogen Dioxide Monitoring Network

DEQ was granted approval by EPA to shut down the Meridian Near-Road site, which included NO_2 monitoring. To retain NAAQS monitoring for NO_2, DEQ relocated the NO_2 monitor to the Meridian St. Luke's NCore site.

The NO_2 design values for 2017–2019 are listed in Appendix A.

2020 Modifications

- DEQ proposes no changes to the NO_2 monitoring network.

5.8 $PM_{10-2.5}$ (PM_{coarse}) Monitoring Network

$PM_{10-2.5}$ (PM_{coarse}) is defined as the particulate fraction with a nominal diameter between 2.5 and 10.0 µm. $PM_{10-2.5}$ is determined by calculating the fractional mass difference between collocated and matching (i.e., same type of monitor) FRM PM_{10} and FRM $PM_{2.5}$ monitors. Section 3, Appendix D of 40 CFR 58 requires $PM_{10-2.5}$ monitoring at NCore monitoring stations.

DEQ initiated $PM_{10-2.5}$ monitoring at the Meridian St. Luke's NCore site beginning January 1, 2011. Both the $PM_{2.5}$ and $PM_{10-2.5}$ samplers are operated every third day according to the national monitoring schedule.

2020 Modification

- DEQ proposes no changes to the $PM_{10-2.5}$ monitoring network.

5.9 Summary of Proposed Network Modifications for DEQ's 2020 Air Monitoring Network Plan

DEQ proposes the following network modifications:

- Continue to replace the existing 2025 FRM $PM_{2.5}$ monitors with Met One Instrument's E- SEQ-FRM $PM_{2.5}$ monitors at all the current 2025 FRM sites. The 2025 FRM monitors were discontinued and are no longer supported by the manufacturer.
- The Sandpoint monitoring site location, owned by University of Idaho, was sold in 2019. DEQ is reviewing alternative site locations in the area to relocate the monitors.
- Install a meteorological tower at the St. Marie's site. This tower will monitor thesame parameters as the existing sites in the Coeur d'Alene region.
- Local changes in site operations at the Nampa Fire Station site could impact $PM_{2.5}$ and PM_{10} concentrations in the future. DEQ is searching for an alternative site in the MSA to relocate the existing monitors. As a SLAMS site, DEQ will coordinate any site relocation with EPA Region 10.
- Relocate the existing BAM $PM_{2.5}$ SPM in Ketchum to a new site at the Hailey Fire Station.
- Decommission the meteorological tower for the Lakes Management Plan; this location is no longer required by the group.
- Replace remaining relative humidity sensors, HMP45C with new HMP155A.
- Relocate the existing BAM $PM_{2.5}$ SPM in Garden City to the BSU campus.

6 Future Ambient Air Monitoring Requirements and Associated Costs

EPA is required to review criteria pollutant NAAQS on a routine 5-year schedule. Currently, EPA is reviewing a number of pollutants, and through rulemaking, will propose changes to ambient air monitoring requirements for some pollutants. This review can result in additional monitors and new monitoring requirements for Idaho. At this time, until rulemakings are made final, it is difficult to specifically project DEQ's future monitoring requirements and associated costs.

Appendix A. DEQ Ambient Monitoring Network Design Values

Many of the Idaho Department of Environmental Quality's (DEQ's) particulate matter ($PM_{2.5}$ and PM_{10}) and ozone monitors were impacted by smoke from wildfires and dust storms from 2017 to 2019. The Clean Air Act allows agencies to flag such data for exceptional and natural events and for the United States Environmental Protection Agency (EPA) to concur if appropriate steps and demonstrations are completed. In the event that EPA concurs that a qualifying exceptional event occurred, that data will be removed from design value calculations. Design values are provided below reflecting inclusion and exclusion of these data; these values are preliminary.

Table A1. 2017–2019 PM_{10} preliminary design values.

Site	County/AQS ID	Exceedances			3-Year Estimated Exceedances
		2017	2018	2019	
Sandpoint	Bonner 160170003	5.0 / 0.0	1.0 / 0.0	0.0 / 0.0	2.0 / 0.0
Pinehurst	Shoshone 160790017	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0
Nampa	Canyon 160270002	0.0 / 0.0	0.0 / 0.0	0.0[a] / 0.0	0.0 / 0.0
Boise	Ada 160010009	1.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.3 / 0.0
Pocatello	Bannock 160050015	1.0 / 0.0	1.0 / 0.0	0.0 / 0.0	0.7 / 0.0

a. Does not meet data completeness criteria.
Notes: A monitor violates the 24-hour PM_{10} National Ambient Air Quality Standard if the 3-year average of estimated exceedances (>150 micrograms per cubic meter) is greater than 1. Concentration data are denoted with/without all "flagged" exceptional event data included. The concentration values may change depending on how many of the "flagged" exceptional events are documentable, as concurred by EPA. Concurred events are removed from design value calculations. AQS = air quality system; ID = identification

Table A2. 2017–2019 preliminary design values for core $PM_{2.5}$ monitoring stations—FRM (primary monitor).

Monitoring Site	County/AQS ID	98th Percentile 24-Hour Concentration (µg/m3)			2017–2019 24-Hour Design Value (µg/m3)	Required Sampling Frequency[a] (Current Frequency)	2017–2019 Annual Design Value (µg/m3)
		2017	2018	2019			
Meridian—St. Luke's	Ada 160010010	40/36	32/23	15/15	29/25	1:3[b] **(1:3)**	7.4/6.1
St. Maries	Benewah 160090010	54/38	31/31[c]	35/35	40/35	1:3 **(1:1)**	11.1/9.7
Nampa—Fire Station	Canyon 160270002	45/37	33/24	25/25	34/29	1:1 **(1:1)**	8.9/7.7
Preston	Franklin 160410002	38/24[d]	27/21	30/30	32/25[e]	1:3 **(1:1)**	6.9/6.3
Salmon	Lemhi 160590004	60/40	31/31	32/32	41/34	1:3 **(1:3)**	10.3/8.7
Pinehurst	Shoshone 160790017	45/36	40/34	32/32	39/34	1:3 **(1:1)**	11.3/10.2

a. Figure 2 provides an explanation of required monitoring/sampling frequencies. Exceptional events are not excluded for the purposes of determining sample frequency.
b. NCore monitors are required to operate every third day.
c. Does not meet data completeness criteria.
d. Concentrations were taken from the Franklin site for 2017 (AQS 160410001)
e. Franklin site decommissioned at the end of 2017; Preston site commissioned in 2018.The design values are from the combined data set.

Notes: A monitor violates the 24-hour $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS) if the 3-year average of the annual 98th-percentile 24-hour average exceeds 35 micrograms per cubic meter (µg/m^3). The annual $PM_{2.5}$ NAAQS is violated if the 3-year average of the annual arithmetic mean exceeds 12 µg/m^3. Concentration data are denoted with/without all "flagged" exceptional event data included. The concentration values may change depending on how many of the "flagged" exceptional events are documentable, as concurred by EPA. Concurred events are removed from design value calculations. AQS = air quality system; ID = identification

Table A3. 2017–2019 ozone preliminary design values.

Site	County/AQS ID	4th-Highest Daily Maximum 8-Hour Average (ppm)			3-Year Design Value (ppm)
		2017	2018	2019	
Boise—White Pine	Ada 160010017	0.076/0.068	0.068/0.064	0.052/0.052	0.065/0.061
Meridian—St. Luke's	Ada 160010010	0.071/0.069	0.067/0.066	0.057/0.057	0.065/0.064

Notes: A monitor violates the 8-hour ozone National Ambient Air Quality Standard if the 3-year average of the annual 4th-highest daily maximum average exceeds 0.070 parts per million (ppm). Concentration data are denoted with/without all "flagged" exceptional event data included. The concentration values may change depending on how many of the "flagged" exceptional events are documentable, as concurred by EPA. Concurred events are removed from design value calculations. AQS = air quality system; ID = identification

Table A4. 2017–2019 carbon monoxide preliminary design values (1-hour).

Site	County/AQS ID	1st-/2nd- Highest 1-Hour Average (ppm)		
		2017	2018	2019
Boise—Eastman	Ada 160010014	20/15.9	4.9/4.6	2.8/2.0
Meridian—St. Luke's	Ada 160010010	1.0/0.9	1.0/1.0	1.0/1.0
Meridian—Near-Road	Ada 160010023	1.0/1.0[a]	—/—	—/—

a. Does not meet data completeness criteria; Near-Road site was decommissioned in 2017.
Notes: A monitor violates the 1-hour carbon monoxide National Ambient Air Quality Standard if it exceeds 35 parts per million (ppm) more than once per year. AQS = air quality system; ID = identification

Table A5. 2017–2019 carbon monoxide preliminary design values (8-hour).

Site	County/AQS ID	1st-/2nd-Highest 8-Hour Average (ppm)		
		2017	2018	2019
Boise—Eastman	Ada 160010014	7.5/4.1	2.0/1.6	1.3/1.3
Meridian—St. Luke's	Ada 160010010	0.8/0.7	0.7/0.7	0.9/0.8
Meridian—Near-Road	Ada 160010023	0.7/0.7[a]	—/—	—/—

a. Does not meet data completeness criteria; Near-Road site was decommissioned in 2017.
Notes: A monitor violates the 8-hour CO National Ambient Air Quality Standard if it exceeds 9 parts per million (ppm) more than once per year. AQS = air quality system; ID = identification

Table A6. 2017–2019 sulfur dioxide preliminary design values.

Site	County/AQS ID	99th Percentile—Highest Daily Maximum 1-Hour Average (ppb)			3-Year Design Value (ppb)
		2017	2018	2019	
Pocatello—STP	Bannock 160050004	37	44	39	40
Soda Springs	Caribou 160290031	34	27	44	35
Meridian—St. Luke's	Ada 160010010	3	3	3	3

Notes: A monitor violates the 1-hour sulfur dioxide National Ambient Air Quality Standard if the 3-year average of the annual 99th-percentile highest daily maximum 1-hour averages exceeds 75 parts per billion (ppb). AQS = air quality system; ID = identification

Table A7. 2017–2019 nitrogen dioxide (NO_2) preliminary design values.

Site	County/AQS ID	98th Percentile—Highest Daily Maximum 1-Hour Average (ppb)			3-Year Design Value (ppb)
		2017	2018	2019	
Meridian— Near-Road	Ada 160010023	50[a]	—	—	—/—
Meridian—St. Luke's	Ada 160010010	—	—[b]	40.8[c]	—/—

a. Does not meet data completeness criteria; Near-Road site was decommission in 2017.
b. Monitor was relocated from the Near-Road site to the St. Luke's site in 4th quarter 2018.
c. Due to computer malfunction onsite, the official AQS start date was 04/01/2019. This number is based on three quarters.
Notes: A monitor violates the 1-hour nitrogen dioxide National Ambient Air Quality Standard if the 3-year average of the annual 98th-percentile highest daily maximum 1-hour averages exceeds 100 parts per billion (ppb). AQS = air quality system; ID = identification

Appendix B. Craters of the Moon and Hells Canyon Monitoring Stations (IMPROVE Network)

The Idaho Department of Environmental Quality (DEQ) is leveraging the IMPROVE monitoring network to fulfill requirements for the particulate matter $(PM)_{2.5}$ transport (Hells Canyon) and $PM_{2.5}$ background (Craters of the Moon National Monument) monitoring sites (Figure B1).

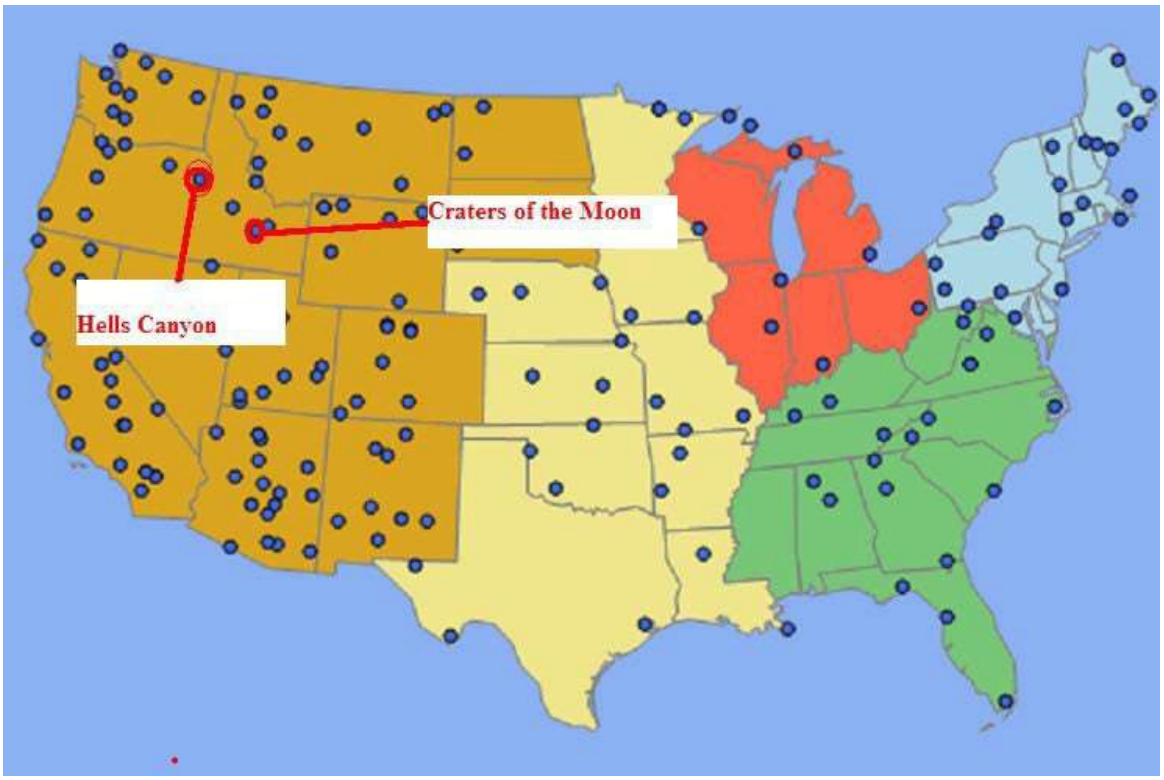


Figure B1. IMPROVE monitoring network.

IMPROVE was initiated in 1985 as an extensive long-term monitoring program to establish current visibility conditions, track changes in visibility, and determine causal mechanism for the visibility impairment in national parks and wilderness areas (*http://vista.cira.colostate.edu/Improve/*).

Craters of the Moon

Monitoring began at the Craters of the Moon site in 1992 (Figure B2). Raw data gathered at this site are found at *https://www.epa.gov/outdoor-air-quality-data/air-data-concentration-plot*.

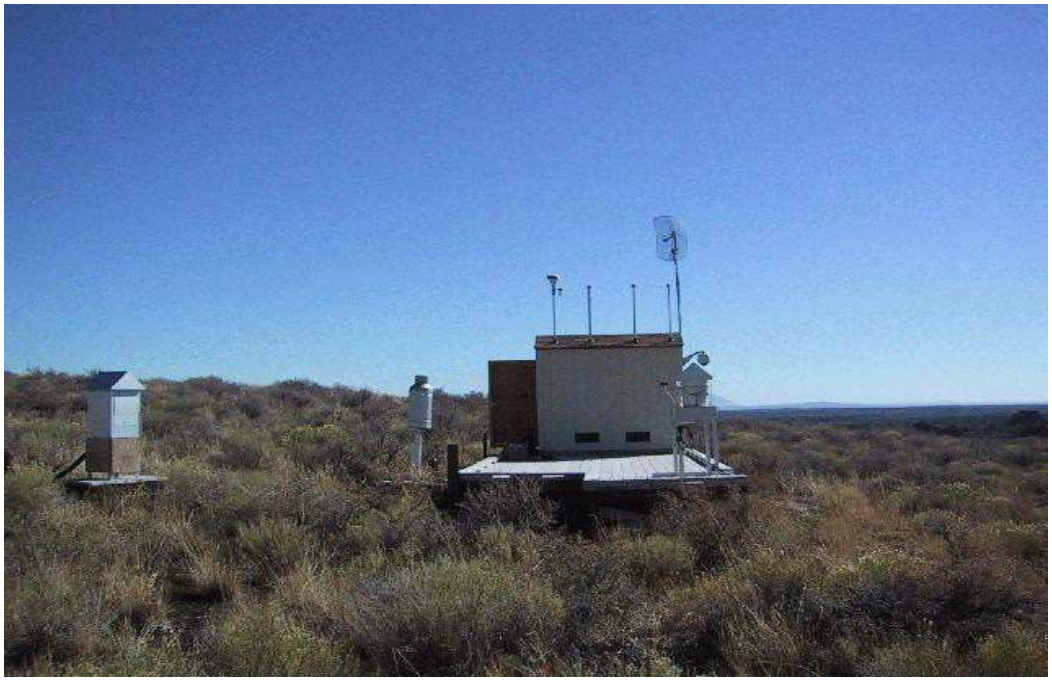


Figure B2. Craters of the Moon sampling platform.

Figure B3 shows the typical background concentration of $PM_{2.5}$ of 1–6 micrograms per cubic meter ($\mu g/m^3$). Only the concentrations through 2nd quarter 2019 have been reported to AQS. On occasion, the monitor is impacted by smoke from regional fires and other burning activities.

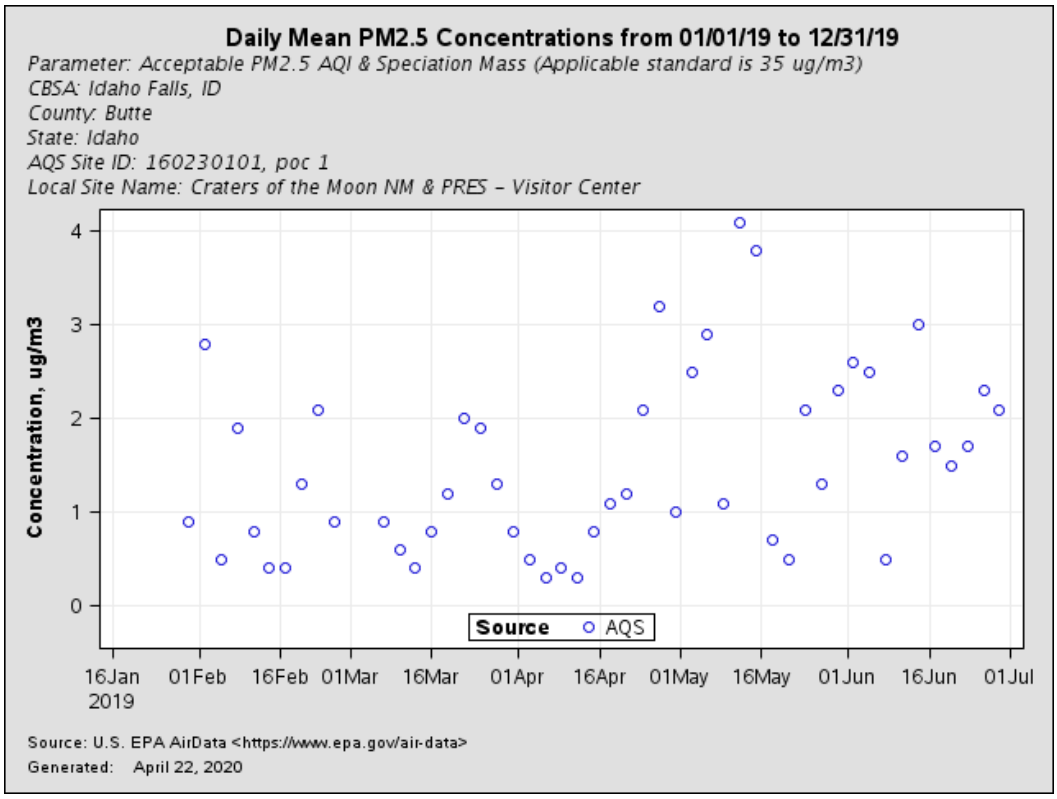


Figure B3. 2019 $PM_{2.5}$ measured at Craters of the Moon IMPROVE site.

Hells Canyon

Monitoring began at the Hells Canyon site in 2001 (Figure B4). Raw data gathered at this site are found at *https://www.epa.gov/outdoor-air-quality-data/air-data-concentration-plot*.

Figure B4. Hells Canyon monitoring station.

Figure B5 shows the Hells Canyon $PM_{2.5}$ measurements for 2019. Only the concentrations through 2nd quarter have been reported to AQS. Typical transport concentrations of 2–5 µg/m^3 are represented; however, on occasion, values can be higher. Typically, elevated levels of $PM_{2.5}$ are associated with either summer/fall smoke impacts or regional winter stagnation events.

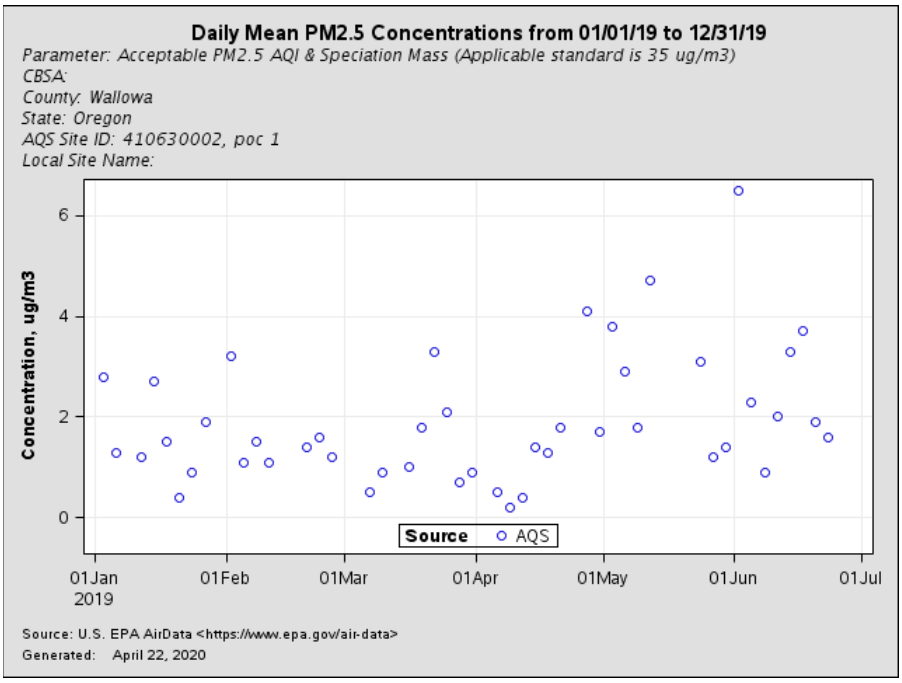


Figure B5. 2019 $PM_{2.5}$ measured at Hells Canyon IMPROVE site.

Appendix C. EPA–DEQ Correspondence

Ozone in the Cache Valley

Ground-Level Ozone

Ozone (O_3) is a highly reactive, odorless, colorless gas composed of three oxygen atoms. Stratospheric ozone found high in the atmosphere within what is known as the "ozone layer" is naturally occurring and beneficial in that it reduces the amount of UV radiation reaching the Earth's surface. Conversely, tropospheric or ground-level ozone is found near the Earth's surface within the air that we breathe and is one of the principal components of smog. Ground-level ozone is not naturally occurring at high levels and is not emitted directly into the air by any pollutant source. It is primarily formed through photochemical reactions (reactions that occur in the presence of sunlight) between two common groups of air pollutants, volatile organic compounds (VOC) and nitrogen oxides (NO_X). These are known as precursor pollutants and are predominantly emitted by anthropogenic (human) sources such as motor vehicles and industrial facilities (vegetation can also be a large source of certain VOC). This often leads to the highest levels of ozone being present in urban areas where the sources of the precursor pollutants are most concentrated.[i]

Ozone NAAQS

The U.S. Environmental Protection Agency (EPA) in compliance with the Federal Clean Air Act (CAA) has established limits on the amount of ozone and other criteria air pollutants allowed in ambient air known as the National Ambient Air Quality Standards (NAAQS). The NAAQS for ozone in the ambient air is currently set at 70 parts per billion (ppb).[ii] This standard is based on the three-year average of the annual fourth-highest maximum daily 8-hour average monitored concentration known as the monitored design value. All areas in Idaho are in attainment of this standard.

The Cache Valley

The Cache Valley is a 60 km long, 20 km wide, bowl-shaped valley located in Franklin County, Idaho and Cache County, Utah. The valley is bounded by relatively tall mountains that create a topographical barrier and help to isolate the airshed within the valley from outside influences. These two counties constitute the Logan, UT-ID metropolitan statistical area (MSA) with a 2018 estimated population of 140,794.[iii] The Utah side of the valley contains the urban core of the MSA including the city of Logan. Less than 10% of the population resides on the Idaho side. The lone ozone monitor in the Cache Valley is operated by the Utah Division of Air Quality and is located in Smithfield, UT approximately 17 km south of the Idaho border and 10 km north of Logan near the edge of the urbanized zone. The most recent design value for this monitor, based on data from 2017-2019, is 64 ppb.[iv]

Air Emissions in the Cache Valley

Emissions of ozone precursor pollutants in the Cache Valley reflect the distribution of the population. The most recently available county-wide emissions estimates are from EPA's 2014 National Emissions Inventory (NEI).[v] As shown below in **Figure 1**, total anthropogenic emissions of NOX and VOC in Cache County are several times larger than in Franklin County. Significant sources of these pollutants in the Cache Valley include onroad and nonroad motor vehicles and solvent utilization.

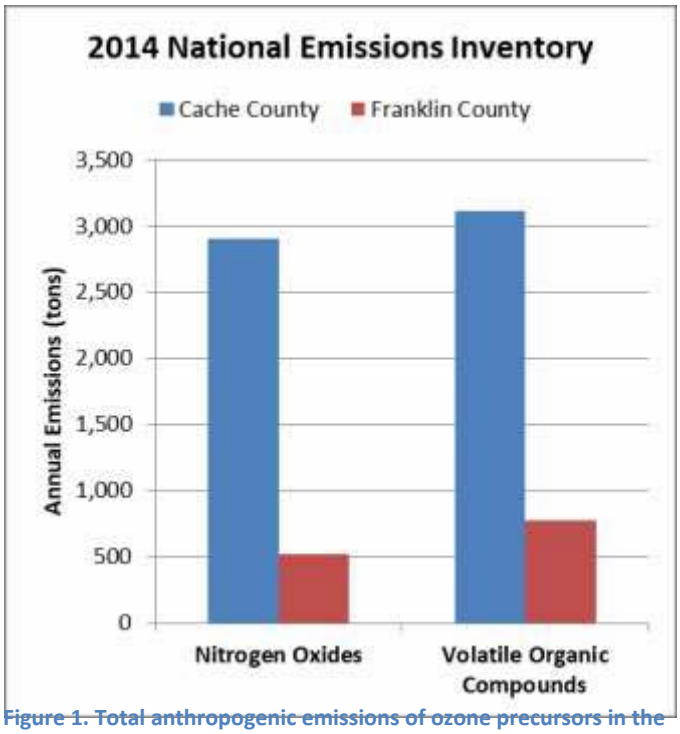


Figure 1. Total anthropogenic emissions of ozone precursors in the Cache Valley by county based on EPA's 2014 NEI.

Ozone in the Cache Valley

Ozone Modeling in the Pacific Northwest

It is impossible to monitor ozone concentrations in all areas all the time. To fill the gaps, sophisticated state of the science air quality models, known as photochemical grid models (PGM), are utilized. These models, such as the Community Multiscale Air Quality model (CMAQ)[vi] and the Comprehensive Air Quality Model with Extensions (CAMx)[vii], attempt to accurately estimate pollutant concentrations by modeling the chemistry and physics of the atmosphere using data on meteorology, terrain, air emissions, and chemical reactions. They are very complicated and often require months of work by experts in air quality modeling to setup, run, evaluate, and post-process the outputs. As such, most areas of the U.S. do not have access to recent or high quality modeling to assess ozone concentrations. That is not the case in the Pacific Northwest (PNW). NW-AIRQUEST is a collaboration amongst Washington, Oregon, Idaho, and a variety of research and regulatory groups throughout the PNW to work on air quality issues in the region.[viii] One of the primary products of the group is the CMAQ-based AIRPACT-5 air quality forecasting model run daily by Washington State University.[ix] This model is unique in the U.S. and allowed for the development of two products that can be used to examine ozone concentrations in the Cache Valley in detail.

Background Concentration Tool

The first of these products is the Background Concentration Tool.[x] This product was developed for the purposes of estimating pollutant concentrations throughout the region for the period July 2015 to June 2017. This product utilized output from the AIRPACT model through this period as well as actual monitored data to provide a geostatistical estimate of concentrations in all areas. As shown in **Figure 2**, the highest estimated concentrations of ozone are present to the south of the Logan, UT-ID MSA. Throughout the MSA itself, concentrations are generally estimated to be well below the NAAQS with a decreasing gradient from south to north which is expected given the higher degree of urbanization to the south and particularly in the highly urbanized Salt Lake City area along the Wasatch Front. The Idaho side of the MSA is estimated to be entirely below 60 ppb outside of the mountainous areas where ozone tends to be higher due to less NO_X titration and deposition than typically occurs at lower elevations.[xi] These areas are also subject to occasional intrusions of high concentrations of stratospheric ozone.[xii]

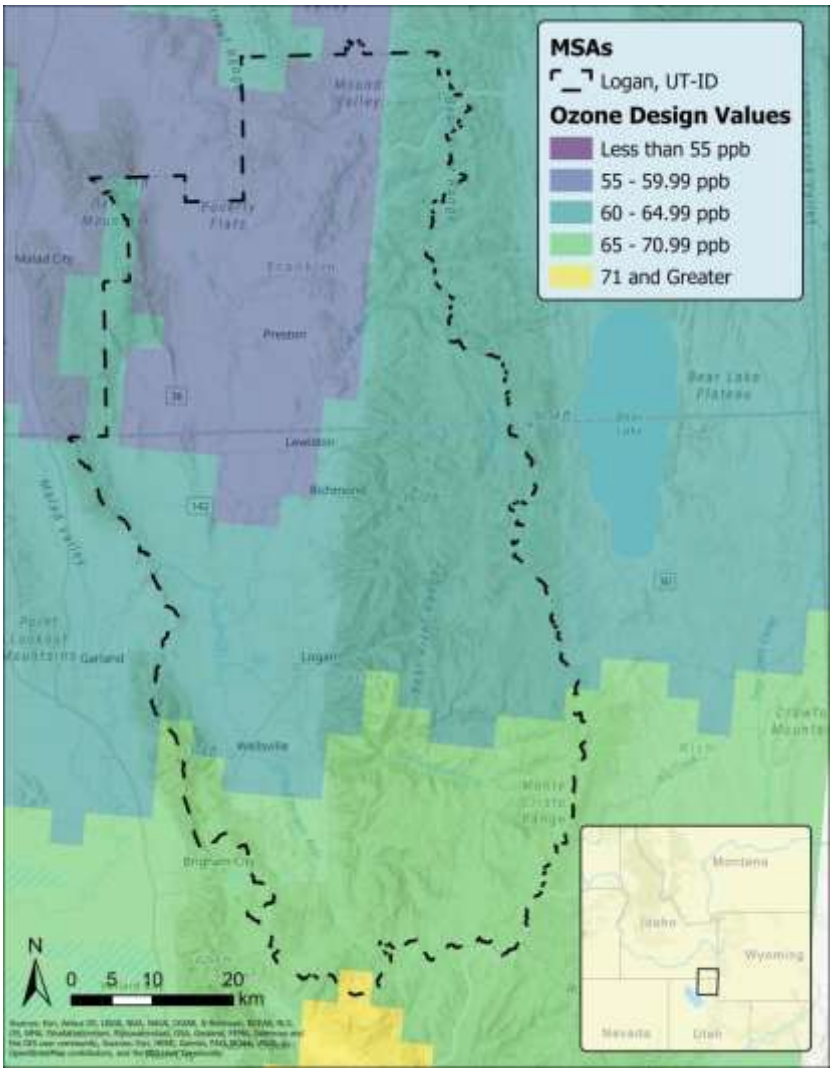


Figure 2. Estimated ozone design values for the period July 2015 to June 2017 from the NW-AIRQUEST Background Concentration Tool. These values are the results of a geostatistical interpolation of model output from AIRPACT-5 and actual monitored ozone concentrations.

Ozone in the Cache Valley

2013 High Ozone Event Modeling Demonstration

The second product is a photochemical modeling analysis of a high ozone event that occurred during the summer of 2013 from July 8 to September 26. This event was modeled as a part of Idaho DEQ's Crop Residue Burning (CRB) state implementation plan (SIP) amendment in 2017.[xiii] The modeling was performed by Idaho DEQ using CMAQ and was based on the AIRPACT modeling platform including detailed, state-specific estimates of air emissions. This event was chosen to represent a time period when ozone formation was at its highest. **Figure 3** shows the results of this modeling effort. Even during an unusually high ozone event, ozone concentrations in the Cache Valley remained at or near the NAAQS (It should be noted that in 2013 the NAAQS was still 75 ppb and therefore all areas were modeled below the standard at the time). Again the higher concentrations are found to the south near the highly urbanized Salt Lake City area along the Wasatch Front. An evaluation of the model performance for this episode is included in the CRB SIP amendment and shows good performance for ozone both throughout the PNW and in Idaho specifically. A further evaluation of model performance at specific monitoring sites in Eastern Idaho and Northern Utah was performed in 2019 at the request of EPA. These results, provided to EPA, also indicate good model performance.

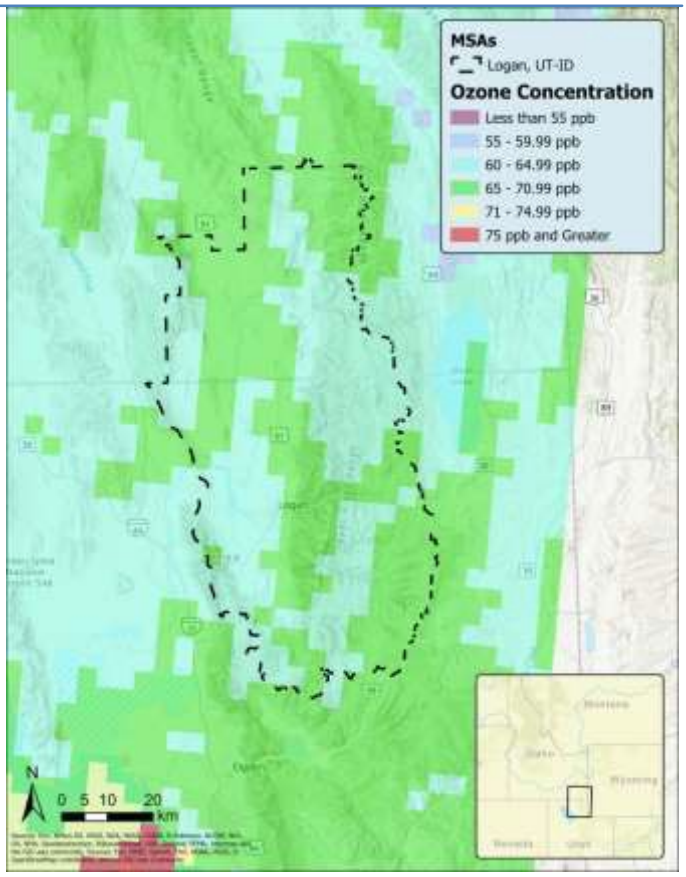


Figure 3. Modeled fourth-highest maximum daily eight-hour average ozone concentrations from the period July 8 to September 26, 2013 based on photochemical grid modeling performed in support of Idaho DEQ's 2017 CRB SIP amendment.

Summary

Ozone in the Cache Valley is likely well below the NAAQS. While there is only one ozone monitor within the valley, an analysis of population distribution, countywide air emissions data, and available modeling results indicate that all areas likely experience ozone concentrations well within the standard set by EPA. Given the rural nature of most of the valley, this is expected, particularly on the Idaho side. The vast majority of anthropogenic emissions of ozone precursor pollutants occur within the small urban core centered on the city of Logan approximately 27 km south of the Idaho border. Modeling based on these emissions suggests a strong gradient of decreasing concentrations to the north. Based on this evidence, ozone concentrations in Franklin County, Idaho are expected to be well within attainment of the NAAQS.

References

[i] epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics#wwh
[ii] 40 CFR 50.19
[iii] factfinder.census.gov/faces/nav/jsf/pages/index.xhtml
[iv] airmonitoring.utah.gov/dataarchive/Y8hrt17-19AveO3.pdf
[v] epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data
[vi] epa.gov/cmaq
[vii] camx.com/about/default.aspx
[viii] lar.wsu.edu/nw-airquest/index.html
[ix] lar.wsu.edu/airpact/index.html
[x] idahodeq.maps.arcgis.com/apps/MapSeries/index.html?appid=0c8a006e11fe4ec5939804b873098dfe
[xi] atmos-chem-phys.net/14/5295/2014/acp-14-5295-2014.pdf
[xii] atmos-chem-phys.net/7/4311/2007/acp-7-4311-2007.pdf
[xiii] deq.idaho.gov/media/60180667/2017-crb-ozone-sip-revision-amendment-0917.pdf

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3123

AIR & RADIATION
DIVISION

May 12, 2020

Mr. Steve Miller
Air Quality Data Bureau Chief
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706

Dear Mr. Miller:

In previous approvals of your Annual Monitoring Network Plans EPA Region 10 identified that Idaho does not operate an ozone monitoring network in the Logan UT-ID MSA as is required by regulations. As you are aware, pursuant to the General Monitoring Requirements of 40 C.F.R. Part 58, Appendix D, Section 2(e), each affected state or local agency where an MSA spans state or other political boundaries is required to separately address all applicable monitoring network design requirements in the absence of an agreement between the affected agencies and the EPA Regional Administrator to divide the overall MSA monitoring responsibilities and requirements among these various agencies to achieve an effective network design. Full monitoring requirements apply separately to each affected State or local agency in the absence of such an agreement. On May 8, 2020, EPA received IDEQ's request for a waiver from monitoring on the Idaho side of the Logan UT-ID MSA and supporting information explaining why an additional monitor is not necessary at this time.

In recent months IDEQ and EPA have reviewed ozone modeling results provided and produced by IDEQ. Modeling produced by IDEQ covered a period spanning July 8 to September 26 of 2013 and included a map of the modeled fourth-highest maximum daily eight-hour average ozone concentrations for this period in the Cache Valley. IDEQ also provided an analysis of ozone modeling from Washington State University spanning July 2015 to June 2017 which included a map of model-estimated ozone design values in the Cache Valley. These modeling results demonstrate a north / south ozone gradient in the Cache Valley with lower modeled ozone concentrations on the Idaho side of the Logan MSA increasing to higher modeled concentrations further south into Cache County Utah. Based on this modeling demonstration and other information IDEQ provided, Region 10 agrees with IDEQ's assertion that the location of maximum ozone concentrations is expected to be in Cache County Utah and not in Franklin County, Idaho. Since ozone monitoring performed by IDEQ in Franklin County would not be sited in the location of expected maximum ozone concentrations in this MSA, Region 10 agrees that additional monitoring performed by IDEQ in Franklin County is not necessary at this time to ensure the adequacy of the Logan UT-ID MSA ozone monitoring network.

This correspondence is our formal agreement, consistent with 40 C.F.R. Part 58, Appendix D, Section 2(e), and approval to waive, pursuant to Appendix D, Section 4.1(b), Idaho's requirement to operate an ozone monitoring network in addition to Utah's ozone monitoring network for the Logan-UT-ID MSA. This waiver is effective for five years (CY-2020 through CY-2024). For

future Annual Monitoring Network Plans, please attach a copy of this waiver as an appendix to the ANP.

EPA requests that IDEQ include the modeling analysis used in its waiver request in its 5-yr network assessments to continue to demonstrate that ozone monitoring requirements may appropriately be met for the Logan UT-ID MSA by the Utah ozone monitoring network. EPA reserves the right to rescind this waiver sooner than five years should events change which dictate a need to re-evaluate the basis of this determination or otherwise reinstate ozone monitoring in Franklin County, Idaho (e.g., changes in MSA population, changes in emissions or air quality, EPA regulatory or guidance changes, significant changes in the ozone monitoring network operated by Utah in Cache County, a determination of network insufficiency by EPA Region 8, or revisions to the NAAQS). If you have any questions regarding this correspondence, please contact me at (206) 553-0985.

Sincerely,

DEBRA SUZUKI Digitally signed by DEBRA SUZUKI
Date: 2020.05.12 11:59:49 -07'00'

Debra Suzuki, Manager
Air Planning, State/Tribal Coordination Branch

From:	Suzuki, Debra
To:	Steve Miller
Cc:	Ben Seely; Jager, Doug; Mary Anderson; Bonifacino, Gina
Subject:	Follow-up on PM2.5 monitoring for the Logan UT-ID MSA
Date:	Friday, August 14, 2020 9:31:17 AM

Hi Steve,

We previously noted in our March 25, 2019 response letter to IDEQ's 2018 Annual Monitoring Network Plan (ANP) that, per 40 CFR Part 58, Appendix D, Section 2(e), for the Logan UT-ID MSA, "Full monitoring requirements apply separately to each affected State or local agency in the absence of an agreement between the affected agencies and the EPA Regional Administrator." We understand that Idaho and Utah are currently working on such an agreement. Once finalized, please update any relevant sections in Idaho's ANP to reference this MOA and include the MOA as an appendix to the ANP.

Additionally, EPA requests that IDEQ provide an additional description in the ANP of the process you used and factors you considered in deciding where to site the $PM_{2.5}$ monitor when the agreement with the City of Franklin was terminated for the Franklin monitoring site. As part of this description, please address the process you used to determine that there were no other viable sites in Franklin and the reasons that Preston is a suitable alternative location for monitoring $PM_{2.5}$ concentrations.

We will review these updates to Idaho's ANP once they have gone through public comment and have been submitted to EPA.

Thank you and please let us know if you have questions or would like to discuss this further.

Debra Suzuki
EPA Region 10
Air Planning & State/Tribal Coordination Branch Manager
206-553-0985

AMENDMENT TO FUNDING AGREEMENT

THIS AMENDMENT is entered into on the date set forth below, between the STATE OF IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY, hereinafter referred to as the DEQ, and CITY OF FRANKLIN, hereinafter referred to as the City.

WHEREAS, the parties previously entered into a Funding Agreement dated November 10, 2010.

WHEREAS, on August 28, 2017 and in accordance with the Funding Agreement the City provided written notice to the DEQ of the City's intent to terminate the Funding Agreement, hereinafter referred to as the Termination Notice.

WHEREAS, the DEQ has requested additional time for the air monitoring equipment to remain on City of Franklin's property, until January 15, 2018.

NOW THEREFORE, in consideration of the DEQ's agreement to continue honoring the Funding Agreement for more than 30 days after the DEQ's receipt of said Termination Notice, and for other good and valuable consideration that the parties acknowledge as received and sufficient, the parties hereby agree as follows.

1. The Termination Notice is adequate for purposes of notice to the DEQ of the City's intent to terminate the Funding Agreement.

2. The Funding Agreement shall not terminate until January 15, 2018, at which time the Funding Agreement shall terminate.

3. If for any reason this Amendment is invalid, the parties agree that it shall be construed as a one-time waiver by the City, whereby the Funding Agreement will not terminate within 30 days from said Termination Notice, so long as the Funding Agreement terminates on January 15, 2018, and the DEQ remains in compliance therewith for the extended interim period.

THE TERMS OF THE FUNDING AGREEMENT REMAIN IN FULL FORCE AND EFFECT, EXCEPT TO THE EXTENT SUCH TERMS ARE CONTRARY TO THIS AMENDMENT. INSOFAR AS THE FUNDING AGREEMENT AND THIS AMENDMENT CONFLICT, THIS AMENDMENT CONTROLS.

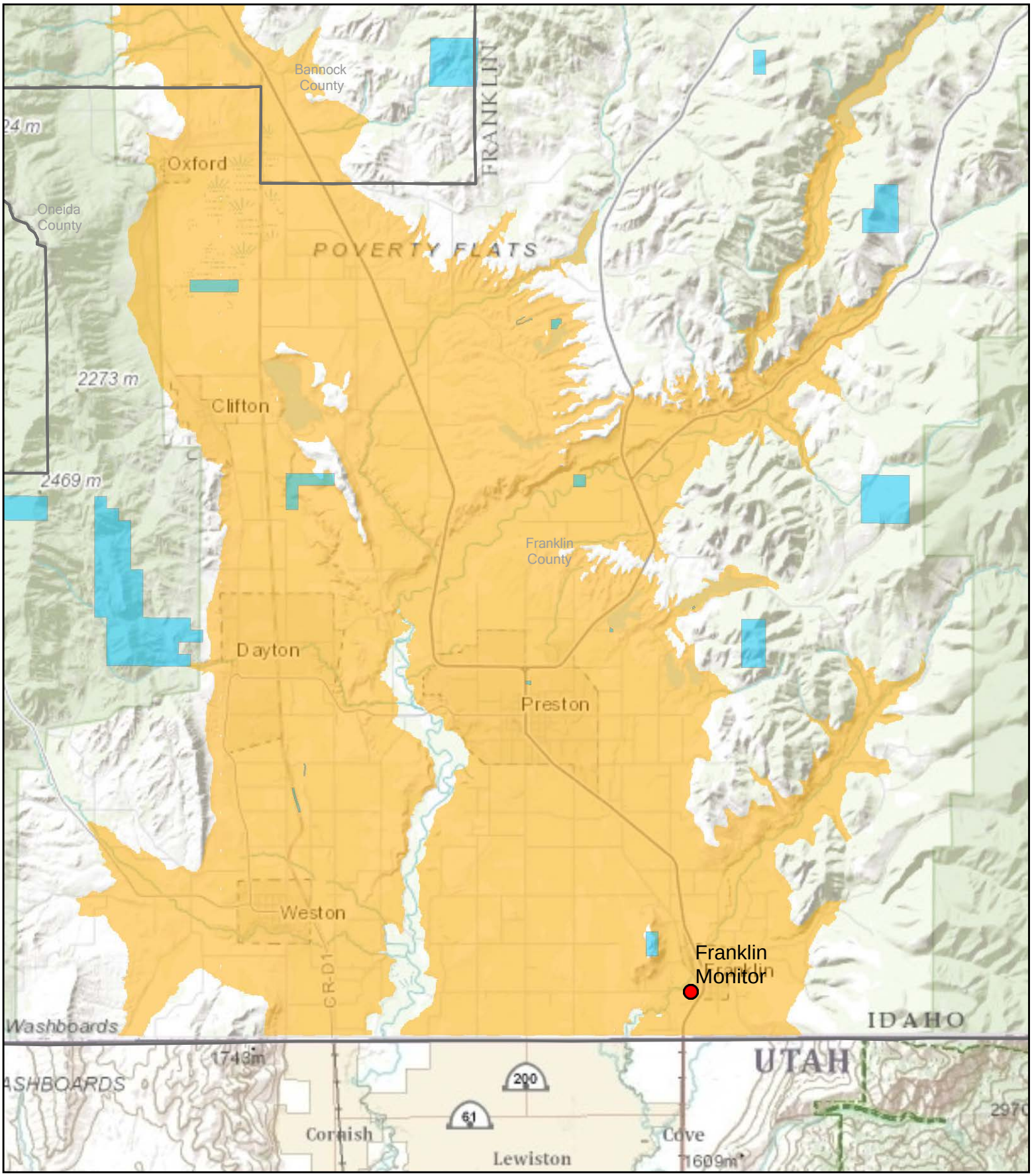
CITY OF FRANKLIN

Name J. Todd Hawkes
It's Mayor
Dated 10-12-2017

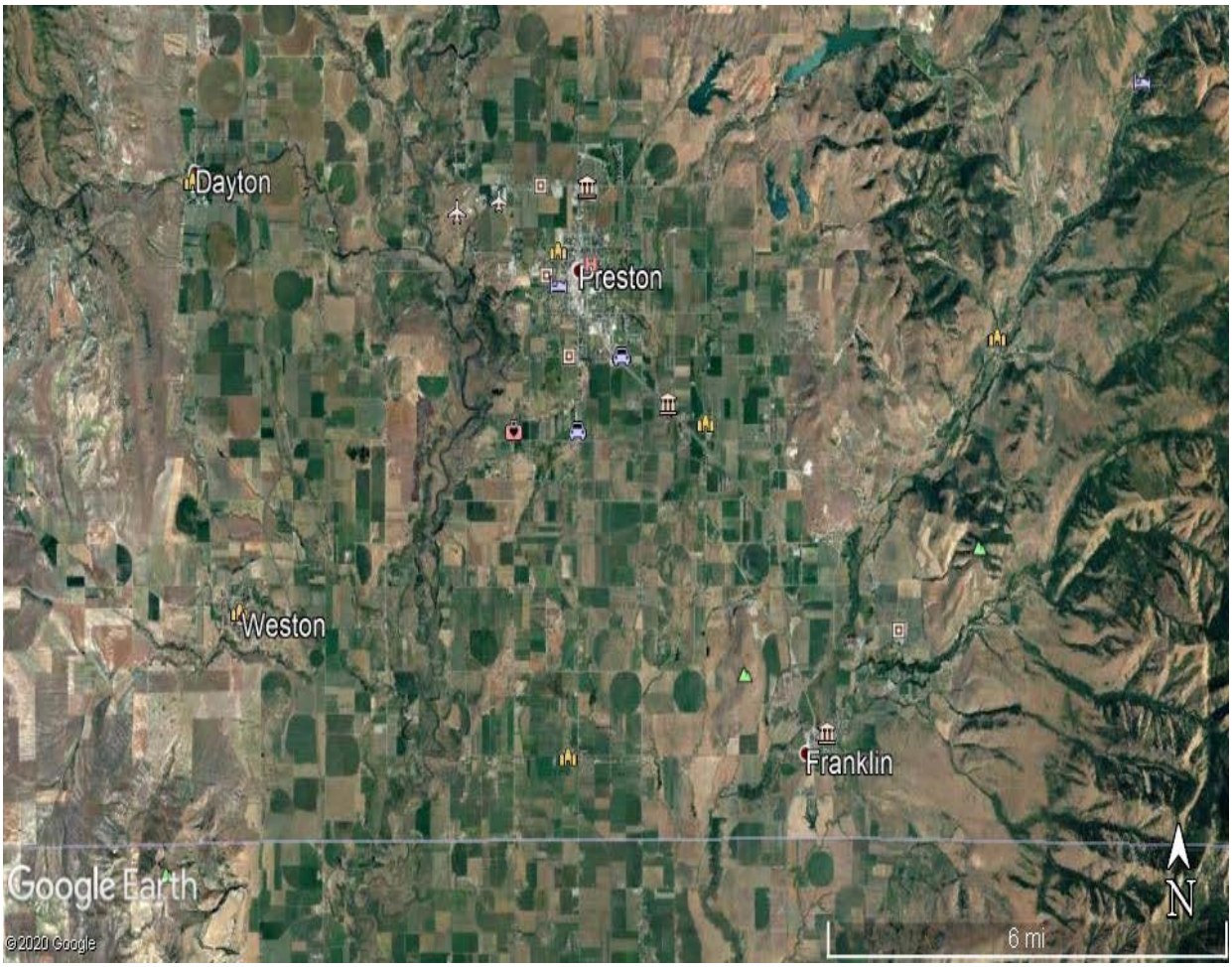
STATE OF IDAHO

Name
It's CFO
Department of Environmental Quality
Dated 9/29/17

Potential New Sites for Franklin Monitor



Topography Map



Memorandum of Understanding
Between
Idaho Department of Environmental Quality
And
Utah Department of Environmental Quality

I. PURPOSE

This Memorandum of Understanding (MOU) is entered into by and between the Idaho Department of Environmental Quality (IDEQ) and the Utah Department of Environmental Quality, Division of Air Quality (UDAQ). The purpose of this MOU is to cooperate with shared resources to collectively meet the United States Environmental Protection Agency (EPA) minimum monitoring requirements for criteria pollutants in the Logan UT-ID Metropolitan Statistical Area (MSA).[1]

II. STATEMENT OF MUTUAL BENEFITS AND INTEREST

The Logan UT-ID MSA consists of Cache County, Utah, and Franklin County, Idaho. The network design criteria for ambient air quality monitoring described in 40 CFR (Code of Federal Regulations) Part 58, Appendix D, Sec. 2(e) require that in areas where MSAs cross jurisdictional boundaries, "full monitoring requirements apply separately to each affected State or local agency in the absence of an agreement between the affected agencies and the EPA Regional Administrator." This MOU establishes an agreement that IDEQ and UDAQ collectively meet the minimum monitoring requirements in the Logan UT-ID MSA.

III. GENERAL ROLES

IDEQ and UDAQ formally agree to collectively provide adequate criteria pollutant monitoring to meet the minimum monitoring requirements for the entire MSA as required by 40 CFR Part 58, Appendix D. The minimum air quality monitoring requirements for the MSA shall apply to the MSA in its entirety and shall not apply to any sole affected agency within the MSA unless agreed upon by IDEQ and UDAQ. Each agency shall inform the other agency at its earliest convenience via telephone or email of any monitoring changes within the MSA. In the event that new minimum monitoring requirements are imposed after the execution of this MOU, IDEQ and UDAQ agree to consult and jointly determine how to meet the new requirements. Each party reserves the right to revoke or terminate this MOU at any time for any reason by giving thirty (30) days written notice prior to the date of termination.

IV. LIMITATIONS

A. All commitments made in this MOU are subject to the availability of funds and each party's budget priorities. Nothing in this MOU, in and of itself, obligates IDEQ and

[1] The Logan UT-ID MSA consists of all of Franklin County, ID and Cache County, UT. On November 13, 2009, final rulemaking action (see 74 FR 58688), the EPA designated a portion of Franklin County, Idaho (see pg 58725) in addition to portions of Cache County, Utah (see pg 58769) as one cross-state nonattainment area for the 2006 24-hour $PM_{2.5}$ NAAQS.

UDAQ to expend funds or to enter into any contract, assistance agreement, interagency agreement, or other financial obligation.

B. This MOU is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between parties to this MOU will be handled in accordance with applicable laws, regulations, and procedures, and will be subject to separate subsidiary agreements what will be effected in writing by representatives of the parties.

C. Except as provided in Section III, this MOU does not create any right or benefit, substantive or procedural, enforceable by law or equity against IDEQ or UDAQ,their officers or employees, or any other person. This MOU does not direct or apply to any person outside IDEQ or UDAQ.

V. PROPRIETARY INFORMATION AND INTELLUCTUAL PROPERTY

No proprietary information or intellectual property is anticipated to arise out of this MOU.

VI. POINTS OF CONTACT

The following individuals are designated points of contact for the MOU:

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VII. APPROVALS

BY: Tiffany Floyd

TITLE: IDEQ, AQ Division Administrator

DATE: 08/27/2020

BY: Kim Shelley (Sep 1, 2020 10:37 MD

TITLE: UDEQ Deputy Director

DATE: 09/01/2020

Appendix D. 40 CFR 58—Appendix D and E Checklists

Population is a significant factor in determining monitoring locations. In most cases, minimum monitoring requirements are based on metropolitan statistical areas (MSA). Figure D1 shows the MSAs and micropolitan statistical areas in Idaho. Table D1 provides 2019 population estimates for each of these areas.

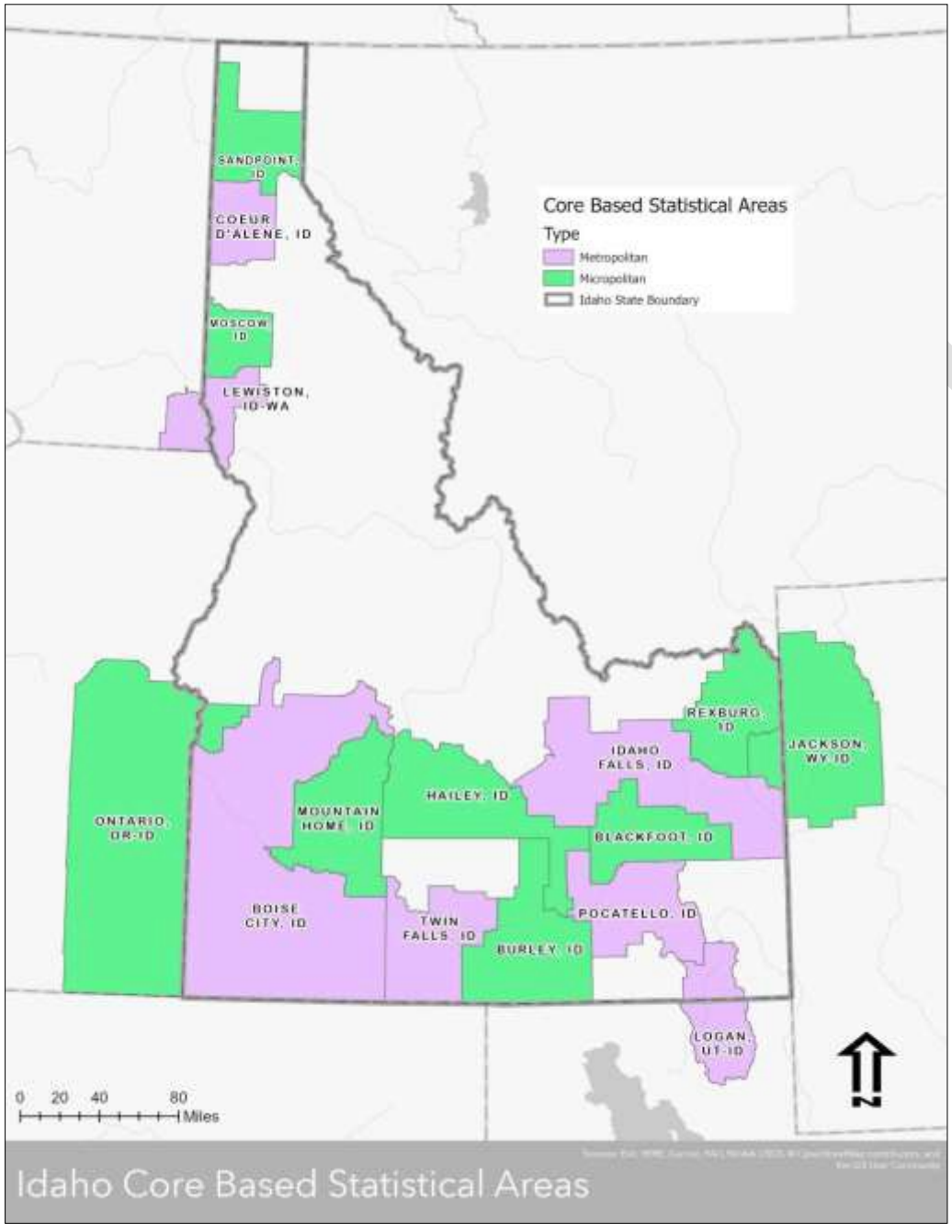

Figure D1. Metropolitan and micropolitan statistical areas in Idaho.

Table D1. Metropolitan and micropolitan statistical area populations in Idaho.

State of Idaho CBSA List[1,2]			
CBSA Number	Name	State	Estimate 2019 Population
Metro			
14260	Boise City - Nampa	ID	749,202
17660	Coeur d'Alene	ID	165,697
26820	Idaho Falls	ID	151,530
30300	Lewiston	ID-WA	62,990
38540	Pocatello	ID	95,489
46300	Twin Falls	ID	111,290
30860	Logan	UT-ID	142,165
Micro			
13940	Blackfoot	ID	46,811
15420	Burley	ID	45,069
25200	Hailey	ID	24,127
34140	Moscow	ID	40,108
34300	Mountain Home	ID	27,511
39940	Rexburg	ID	53,006
41760	Sandpoint	ID	45,739
36620	Ontario (Payette Co.)	OR-ID	54,522
27220	Jackson	WY-ID	35,606

[1]Minimum monitoring requirements apply to the metropolitan statistical area (MSA). CBSA includes both MSAs and micropolitan statistical areas.
[2]Population based on latest available census figures. Census data obtained from https://www.census.gov/data/tables/time-series/demo/popest/2010s-total-metro-and-micro-statistical-areas.html on 4/22/2020.

PART 58 APPENDIX D SITE EVALUATION FORM FOR PM2.5				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
4.7.1(a)	States, and where applicable local agencies must operate the minimum number of required $PM_{2.5}$ SLAMS sites listed in Table D-5 of this appendix. Use the form below and Table D-5 to verify if each of your MSAs have the appropriate number of SLAMS FRM/FEM/ARM samplers.	X		
4.7.1(b)	Each required SLAMS FRM/FEM/ARM monitoring stations or sites must be sited to represent area-wide air quality in the given MSA (typically neighborhood or urban spatial scale, though micro-or middle-scale okay if it represent many such locations throughout the MSA).	X		
4.7.1(b)(1)	At least one SLAMS FRM/FEM/ARM monitoring station is to be sited at neighborhood or larger scale in an area of expected maximum concentration for each MSA where monitoring is required by 4.7.1(a).	X		
4.7.1(b)(2)	For CBSAs with a population of 1,000,000 or more persons, at least one FRM/FEM/ARM $PM_{2.5}$ monitor is to be collocated at a near-road NO_2 station.			X
4.7.1(b)(3)	For MSAs with additional required SLAMS sites, a FRM/FEM/ARM monitoring station is to be sited in an area of poor air quality.	X*		
4.7.2	Each State must operate continuous $PM_{2.5}$ analyzers equal to at least one-half (round up) the minimum required sites listed in Table D-5 of this appendix. At least one required continuous analyzer in each MSA must be collocated with one of the required FRM/FEM/ARM monitors, unless at least one of the required FRM/FEM/ARM monitors is itself a continuous FEM or ARM monitor, in which case no collocation requirement applies.	X		
4.7.3	Each State shall install and operate at least one $PM_{2.5}$ site to monitor for regional background and at least one $PM_{2.5}$ site to monitor regional transport (note locations in comment field). Non- reference PM2.5 monitors such as IMPROVE can be used to meet this requirement.	X**		
4.7.4	Each State shall continue to conduct chemical speciation monitoring and analyses at sites designated to be part of the $PM_{2.5}$ Speciation Trends Network (STN).	X		

Comments:

*DEQ has several sites in Idaho that are not found within an officially listed MSA, but DEQ has retained SLAMS FRM/FEM/ARM monitoring stations there due to moderate to poor air quality. Those sites include Pinehurst, Salmon, and St. Maries.

**DEQ uses the IMPROVE network's Hells Canyon site for PM2.5 regional transport and the Craters of the Moon National Monument site for PM2.5 regional background.

MSA Description[1]	Population[2]	2017-2019 24-Hour Design Value[3]	Minimum required number of PM2.5 SLAMS FRM/FEM/ARM sites (from Table D-5)	Present number of PM2.5 SLAMS FRM/FEM/ARM sites in MSA	Present number of continuous PM2.5 analyzers in MSA	Present number of PM2.5 STN analyzers in MSA
Boise City-Nampa	749,202	34/29	2	2	5	2
Coeur d'Alene	165,697	-	0	0	1	0
Idaho Falls	151,530	-	0	0	1	0
Lewiston	62,990	-	0	0	1	0
Pocatello	95,489	-	0	0	1	0
Twin Falls	111,290	-	0	0	1	0
Logan[4]	142,165	32/25	1	1	1	0

[1]Minimum monitoring requirements apply to the metropolitan statistical area (MSA). CBSA includes both MSAs and micropolitan statistical areas, see Figure D1.

[2]Population based on latest available census figures, see Table D1.

[3]Design values with and without exceptional events.

[4]Monitor information provided reflects Idaho DEQ's monitoring network. Idaho DEQ and Utah DEQ jointly meet all minimum monitoring requirements for the MSA.

Table D-5 of Appendix D to Part 58 – PM2.5 Minimum Monitoring Requirements		
MSA population[1, 2]	Most recent 3-year design value ≥85% of any PM2.5 NAAQS[3]	Most recent 3-year design value <85% of any PM2.5 NAAQS[3, 4]
>1 million	3	2
500K to 1 million	2	1
50K to <500K[5]	1	0

[1]Minimum monitoring requirements apply to the Metropolitan statistical area (MSA).
[2]Population based on latest available census figures. https://www.census.gov/
[3]The $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) levels and forms are defined in 40 CFR part 50.
[4]These minimum monitoring requirements apply in the absence of a design value.
[5]Metropolitan statistical areas (MSA) must contain an urbanized area of 50,000 or more population.

PART 58 APPENDIX D SITE EVALUATION FORM FOR PM10				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
4.6(a)	Table D-4 indicates the approximate number of permanent stations required in MSAs to characterize national and regional PM10 air quality trends and geographical patterns. Use the form below and Table D-4 to verify if your PM10 network has to appropriate number of samplers.	X		
Comments:				

MSA Description[1]	Population[2]	Minimum required number of PM10 stations (from Table D-4)	Present number of PM10 stations in MSA
Boise City-Nampa	749,202	1-2	2
Coeur d'Alene	165,697	0	0
Idaho Falls	151,530	0	0
Lewiston	62,990	0	0
Pocatello	95,489	0	1
Twin Falls	111,290	0	0
Logan	142,165	0	0

[1]Minimum monitoring requirements apply to the metropolitan statistical area (MSA). CBSA includes both MSAs and micropolitan statistical areas, see Figure D1.

[2]Population based on latest available census figures, see Table D1.

Table D-4 of Appendix D to Part 58 – PM10 Minimum Monitoring Requirements			
MSA population[1, 2]	High concentration[2]	Medium concentration[3]	Low concentration[4 5]
>1 million	6-10	4-8	2-4
500K to 1 million	4-8	2-4	1-2
250K to 500K	3-4	1-2	0-1
100K to 250K	1-2	0-1	0

[1]Selection of urban areas and actual numbers of stations per area will be jointly determined by EPA and the State agency.

[2]High concentration areas are those for which ambient PM10 data show ambient concentrations exceeding the PM10 NAAQS by 20 percent or more.

[3]Medium concentration areas are those for which ambient PM10 data show ambient concentrations exceeding 80 percent of the PM10 NAAQS.

[4]Low concentration areas are those for which ambient PM10 data show ambient concentrations less than 80 percent of the PM10 NAAQS.

[5]These minimum monitoring requirements apply in the absence of a design value.

PART 58 APPENDIX D SITE EVALUATION FORM FOR SO_2				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
4.4.1	State and, where appropriate, local agencies must operate a minimum number of required SO_2 monitoring sites (based on PWEI calculation specified in 4.4.2 – use Table 1 and 2 below to determine minimum requirement for each CBSA)	X		
4.4.2(a)(1)	Is the monitor sited within the boundaries of the parent CBSA and is it one of the following site types: population exposure, highest concentration, source impacts, general background, or regional transport?	X		
4.4.3(a)	Has the EPA Regional Administrator required additional SO_2 monitoring stations above the minimum number of monitors required in 4.4.2? If so, note location in comment field.	X*		
4.4.5(a)	Is your agency counting an existing SO2 monitor at an NCore site in a CBSA with a minimum monitoring requirement?	X		
Comments: *DEQ is conducting source/highest concentration monitoring in Pocatello and Soda Springs.				

Table

CBSA Description[1]	Population[2]	total amount of SO_2 in tons per year emitted within the CBSA (used 2017 NEI[3])	PWEI (population x total emissions ÷1,000,000)	Minimum required number of SO_2 monitors in CBSA (see Table 2 below)	Present number of SO_2 monitors in CBSA
Boise City	749,202	472.38	353.9	0	1
Coeur d'Alene	165,697	149.93	24.8	0	0
Idaho Falls	151,530	60.38	9.1	0	0
Lewiston	62,990	213.92	13.5	0	0
Pocatello	95,489	902.72	86.2	0	1
Logan	142,165	55.62	7.9	0	0
Twin Falls	111,290	699.41	77.8	0	0
Caribou County[4]	7,155	882.41	6.3	0	1

[1]Minimum monitoring requirements apply to the Core Based statistical area (CBSA). CBSA includes both metropolitan and micropolitan statistical areas, see Figure D1.

[2]Population based on latest available census figures, see Table D1.

[3]Based on 2017 NEI submitted data, currently under EPA review.

[4]The Soda Springs monitoring site is located in Caribou County and is not within a CBSA. DEQ operates an SO_2 site in the county based on local emission sources.

Table 2. Minimum SO_2 Monitoring Requirements (Section 4.4.2 of App D to Part 58)	
PWEI (Population weighted Emission Index) Value	Require number of SO_2 monitors
>= 1,000,000	3
>= 100,000 but < 1,000,000	2
>= 5,000 but < 100,000	1

PART 58 APPENDIX D SITE EVALUATION FORM FOR CARBON MONOXIDE (CO)					
APPLICABLE SECTION	REQUIREMENT	OBSERVED	CRITERIA MET?		
			YES	NO	N/A
4.2.1(a)	One CO monitor is required to operate collocated with one required near-road NO_2 monitor in CBSAs having a population of 1,000,000 or more persons. If a CBSA has more than one required near-road NO_2 monitor, only one CO monitor is required to be collocated with a near-road NO_2 monitor within that CBSA.				X
4.2.2(a)	Has the EPA Regional Administrator required additional CO monitoring stations above the minimum number of monitors required in 4.2.1? If so, note location in comment field.		X*		
Comments: *DEQ has two additional monitors that are required. One is at DEQ's St. Luke's – Meridian, ID N-Core site, and the other one is at DEQ's Boise – Eastman CO maintenance area site.					

CBSA Description[1]	Population[2]	Minimum required number of SLAMS CO sites	Present number of SLAMS CO sites in CBSA
Boise City-Nampa	749,202	1 – N-Core* 1 – Maintenance Area*	2
Coeur d'Alene	165,697	0	0
Idaho Falls	151,530	0	0
Lewiston	62,990	0	0
Pocatello	95,489	0	0
Twin Falls	111,290	0	0
Logan	142,165	0	0

[1]Minimum monitoring requirements apply to the Core Based statistical area (CBSA). CBSA includes both metropolitan and micropolitan statistical areas, see Figure D1.

[2]Population based on latest available census figures, see Table D1.

PART 58 APPENDIX D SITE EVALUATION FORM FOR NITROGEN DIOXIDE (NO2)				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
4.3.2(a)	Near-road NO2 Monitors: One microscale near-road NO_2 monitoring station in each CBSA with a population of 500,000 or more persons.			X
4.3.2(a)	Near-road NO2 Monitors: An additional near-road NO_2monitoring station is required for any CBSA with a population of 2,500,000 persons, or in any CBSA with a population of 500,000 or more persons that has one or more roadway segments with 250,000 or greater AADT count.			X
4.3.2(b)	Near-road NO2 Monitors: Measurements at required near-road NO_2 monitor sites utilizing chemiluminescence FRMs must include at a minimum: NO, NO_2, and NO_X			X
4.3.3(a)	Area-wide NO2 Monitoring: One monitoring station in each CBSA with a population of 1,000,000 or more persons to monitor a location of expected highest NO_2 concentrations representing the neighborhood or larger spatial scales.			X
Comments: DEQ recently shut down its near-road monitoring site per EPA approval. DEQ is operating an NO2 monitor at its St. Luke's N-Core site.				

Table

CBSA Description[1]	Population[2]	Required number of Near-road NO2 sites	Present number of Near-road NO2 sites	Required number of Area-wide NO2 sites	Present number of Area-wide NO2 sites
Boise City-Nampa	749,202	0	0	0	0
Coeur d'Alene	165,697	0	0	0	0
Idaho Falls	151,530	0	0	0	0
Lewiston	62,990	0	0	0	0
Pocatello	95,489	0	0	0	0
Twin Falls	111,290	0	0	0	0
Logan	142,165	0	0	0	0

[1]Minimum monitoring requirements apply to the Core Based statistical area (CBSA). CBSA includes both metropolitan and micropolitan statistical areas, see Figure D1.
[2]Population based on latest available census figures, see Table D1.

PART 58 APPENDIX D SITE EVALUATION FORM FOR OZONE				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
4.1(b)	At least one O_3 site for each MSA, or CSA if multiple MSAs are involved, must be designed to record the maximum concentration (note location in comment field).	X*		
4.1(c)	The appropriate spatial scales for O_3 sites are neighborhood, urban, and regional (note deviations in comment field).	X		
4.1(f)	Confirm that the monitoring agency consulted with EPA R10 when siting the maximum O3 concentration site.	X		
4.1(i)	O3 is being monitored at SLAMS monitoring sites during the "ozone season" as specified in Table D-3 of Appendix D to Part 58.	X		
Comments: *DEQ's White Pine Elementary site in Boise serves as the maximum concentration site.				

MSA Description[a]	Population[b]	Minimum required number of SLAMS O3 sites (from Table D-2)	Present number of SLAMS O3 sites in MSA
Boise City-Nampa	749,202	2	2
Coeur d'Alene	165,697	0	0
Idaho Falls	151,530	1	0[c]
Lewiston	62,990	0	0
Pocatello	95,489	0	0
Twin Falls	111,290	0	0
Logan	142,165	1	1[d]

[a]Minimum monitoring requirements apply to the Core Based statistical area (CBSA). CBSA includes both metropolitan and micropolitan statistical areas, see Figure D1.
[b]Population based on latest available census figures, see Table D1.
[c]DEQ Monitoring requirement postponed until 2023 by the EPA.
[d]Monitor operated by the Utah Department of Environmental Quality.

Table D-2 of Appendix D to Part 58 - SLAMS O3 Monitoring Minimum Requirements		
MSA population	Most recent 3-year design value concentrations ≥85% of any O3 NAAQS[1]	Most recent 3-year design value concentrations <85% of any O3 NAAQS[2,3]
>10 million	4	2
4-10 million	3	1
350,000-<4 million	2	1
50,000-<350,000[5]	1	0

[1]The ozone (O3) National Ambient Air Quality Standards (NAAQS) levels and forms are defined in 40 CFR part 50.
[2]These minimum monitoring requirements apply in the absence of a design value.
[3]Metropolitan statistical areas (MSA) must contain an urbanized area of 50,000 or more population.

Table D-3 of Appendix D to Part 58—Ozone Monitoring Season by State		
State	Begin month	End Month
Idaho	April	September

PART 58 APPENDIX E SITE EVALUATION FORM FOR CO

SITE NAME__**Eastman**_____SITE ADDRESS___**166 N. 9th Street, Boise ID 83702**
AQS ID__**160010014**_____EVALUATION DATE__**04/07/2020**_____EVALUATOR__**Ed Jolly – IdahoDEQ**_____

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	For neighborhood or larger spatial scale sites the probe must be located 2-15 meters above ground level and must be at least 1 meter vertically or horizontally away from any supporting structure, walls, *etc*., and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.	Eastman is a microscale site.			X
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet (exception is street canyon or source-oriented sites where buildings and other structures are unavoidable).		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.			X*	
	(c) No trees should be between source and probe inlet for microscale sites.		X**		
6. SPACING FROM ROADWAYS	2. (b) Microscale CO monitor probes in downtown areas or urban street canyon locations shall be located a minimum distance of 2 meters and a maximum distance of 10 meters from the edge of the nearest traffic lane.		X***		
	2. (c) Microscale CO monitor inlet probes in downtown areas or urban street canyon locations shall be located at least 10 meters from an intersection and preferably at a midblock location.		X		
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex) for reactive gases.		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X****		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section.					

Other Comments:

*Probe inlet is approximately 1 meter from tree branch. The City of Boise has worked with DEQ to keep the tree trimmed, but cutting the tree down is not favored.

**Trees are on North and South sides of probe inlet and not the West side where the traffic (CO source) occurs.

***A further analysis of this site revealed a “no parking” area immediately in front of the probe inlet. If one takes this space into account and then measures to the edge of the nearest traffic lane, the probe inlet is greater than 2 meters away.

****This site is not an N-Core site. Its sample residence time is longer than 20 seconds.

PART 58 APPENDIX E SITE EVALUATION FORM FOR CO

SITE NAME **N-Core** SITE ADDRESS **Eagle Road & I-84, Meridian ID 83642**

AQS ID **160010010** EVALUATION DATE **04/02/2020** EVALUATOR **Ed Jolly – IdahoDEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	For neighborhood or larger spatial scale sites the probe must be located 2-15 meters above ground level and must be at least 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet (exception is street canyon or source-oriented sites where buildings and other structures are unavoidable).		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	2. (b) Microscale CO monitor probes in downtown areas or urban street canyon locations shall be located a minimum distance of 2 meters and a maximum distance of 10 meters from the edge of the nearest traffic lane.				X
	2. (c) Microscale CO monitor inlet probes in downtown areas or urban street canyon locations shall be located at least 10 meters from an intersection and preferably at a midblock location.				X
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex) for reactive gases.		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					
Other Comments:					

Roadway average daily traffic, vehicles per day	Minimum distance[1] (meters)
≤10,000	10
15,000	25
20,000	45
30,000	80
40,000	115
50,000	135
≥60,000	150

[1] Distance from the edge of the nearest traffic lane. The distance for intermediate traffic counts should be interpolated from the table values based on the actual traffic count.

PART 58 APPENDIX E SITE EVALUATION FORM FOR NO, NOx, NO2, and NOy

SITE NAME_ **N-Core** SITE ADDRESS **Eagle Road & I-84, Meridian ID 83642**
AQS ID__**160010010**_____-___EVALUATION DATE_**04/02/2020**
EVALUATOR **Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	For neighborhood or larger spatial scale sites the probe must be located 2-15 meters above ground level and must be at least 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. Microscale near-road NO_2 monitoring sites are required to have sampler inlets between 2 and 7 meters above ground level. If located near the side of a building or wall, then locate the sampler probe on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale and larger avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
	(d) For near-road NO_2 monitoring stations, the monitor probe shall have an unobstructed air flow, where no obstacles exist at or above the height of the monitor probe, between the monitor probe and the outside nearest edge of the traffic lanes of the target road segment.				X
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	See spacing requirements table below		X		
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore and at NO_2 sites must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					
Other Comments:					

Roadway average daily traffic, vehicles per day	Minimum distance[1] (meters)	Minimum distance[1,] (meters)
≤1,000	10	10
10,000	10	20
15,000	20	30
20,000	30	40
40,000	50	60
70,000	100	100
≥110,000	250	250

[1]Distance from the edge of the nearest traffic lane. The distance for intermediate traffic counts should be interpolated from the table values based on the actual traffic count.

PART 58 APPENDIX E SITE EVALUATION FORM FOR O3					
SITE NAME__**N-Core**_____SITE ADDRESS__**Eagle Road & I-84, Meridian, ID 83642**_____ AQS ID__**160010010**_____EVALUATION DATE__**04/02/2020**_____EVALUATOR **Ed Jolly – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
	(b) To minimize scavenging effects, the probe inlet must be away from furnace or incineration flues or other minor sources of SO_2 or NO.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.				X*
6. SPACING FROM ROADWAYS	See spacing requirements table below		X		
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					
Other Comments: *Not a microscale site.					

Roadway average daily traffic, vehicles per day	Minimum distance[1] (meters)	Minimum distance[1, 2] (meters)
≤1,000	10	10
10,000	10	20
15,000	20	30
20,000	30	40
40,000	50	60
70,000	100	100
≥110,000	250	250

[1]Distance from the edge of the nearest traffic lane. The distance for intermediate traffic counts should be interpolated from the table values based on the actual traffic count.

[2]Applicable for ozone monitors whose placement has not already been approved as of December 18, 2006.

PART 58 APPENDIX E SITE EVALUATION FORM FOR O3

SITE NAME **White Pine Elementary** SITE ADDRESS **401 E. Linden St., Boise ID 83706**
AQS ID **160010017** EVALUATION DATE **04/07/2020** EVALUATOR **Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc*., and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
	(b) To minimize scavenging effects, the probe inlet must be away from furnace or incineration flues or other minor sources of SO_2 or NO.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.				X*
6. SPACING FROM ROADWAYS	See spacing requirements table below		X		
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					

Other Comments:
*Not a microscale site.

Roadway average daily traffic, vehicles per day	Minimum distance[1] (meters)	Minimum distance[1, 2] (meters)
≤1,000	10	10
10,000	10	20
15,000	20	30
20,000	30	40
40,000	50	60
70,000	100	100
≥110,000	250	250

[1]Distance from the edge of the nearest traffic lane. The distance for intermediate traffic counts should be interpolated from the table values based on the actual traffic count.

[2]Applicable for ozone monitors whose placement has not already been approved as of December 18, 2006.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Pocatello** SITE ADDRESS **Corner of Garrett and Gould Streets, Pocatello ID 83204** AQS ID **160050015** EVALUATION DATE **05/04/2020** EVALUATOR **Clay Woods– Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Boise Fire Station** SITE ADDRESS **16th and Front Street, Boise ID 83702**
AQS ID **160010009** EVALUATION DATE **04/08/2020**
EVALUATOR **Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Cottonwood** SITE ADDRESS **BLM Field Office – 1 Butte Dr., Cottonwood ID 83522**
AQS ID **N/A** EVALUATION DATE **04/02/2020**
EVALUATOR **Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.			X*	
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.			X**	
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

* A tree is located 6 meters away from the monitor. The tree height is 7 meters above the height of the inlet. This monitor (e-sampler) is operated seasonally and is not a SLAMS site. The predominant wind direction during the season of highest pollutant concentration is not impeded by the tree.

**The monitor is approximately 6 meters from the drip line of a tree.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Garden Valley** SITE ADDRESS **946 Banks Lowman Rd., Garden Valley ID 83622**
AQS ID **160150002** EVALUATION DATE **04/08/2020**
EVALUATOR **Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Grangeville** SITE ADDRESS **USFS Compound – Grangeville ID 83530**
AQS ID **160490002** EVALUATION DATE **04/02/2020**
EVALUATOR **Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Idaho City** SITE ADDRESS **3851 Hwy 21, Idaho City ID 83631**
AQS ID **160150001** EVALUATION DATE **04/08/2020**
EVALUATOR **Ed jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Idaho Falls** SITE ADDRESS **Hickory and Sycamore Streets, Idaho Falls ID 83402**
AQS ID **160190011** EVALUATION DATE **04/08/2020**
EVALUATOR **Roger Sauer – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Juliaetta** SITE ADDRESS **3rd Street, Juliaetta, ID 83535**
AQS ID **N/A** EVALUATION DATE **04/01/2020**
EVALUATOR **Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Ketchum** SITE ADDRESS **111 West 8th Street, Ketchum ID 83340**
AQS ID **160130004** EVALUATION DATE **04/27/2020**
EVALUATOR **Chad Silver – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.			See Notes	
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		

Are there any changes that might compromise original siting criteria?
There is a new modular building 14 feet directly to the east that isn't shown on the Google Earth satellite image. A representation of the new building has been drawn on the satellite image and included below. The trees shown to the East on the Google Earth satellite image no longer exist.

Other Comments:
There is one spruce tree to the south that does not meet siting criteria. There is also a (no idling) parking lot immediately to the west.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Lancaster** SITE ADDRESS **Nursey Rd., Coeur d'Alene, ID 83814**
AQS ID **160550003** EVALUATION DATE **5/7/2020**
EVALUATOR **Kelby Sullins – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X*		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:
*Surrounding fields show light farm equipment use and minimal ground cover disturbance.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Lewiston** SITE ADDRESS **1200 29th Street, Lewiston ID 83501**
AQS ID **160690012** EVALUATION DATE **04/06/2020**
EVALUATOR **Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **McCall** SITE ADDRESS **500 N. Mission Street, McCall ID 83638**

AQS ID **160850002** EVALUATION DATE **04/08/2020**

EVALUATOR **Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.			X*	
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

*Small tree is located at 8.7 meters away from monitor.

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Moscow** SITE ADDRESS **1025 Plant Sciences Rd., Moscow ID 83843**
AQS ID **160570005** EVALUATION DATE **04/03/2020**
EVALUATOR **Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Mt. Hall** SITE ADDRESS **1275 Idaho 1, Bonners Ferry ID 83805** AQS ID **N/A** EVALUATION DATE **5/05/2020** EVALUATOR **Kelby Sullins – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Nampa** SITE ADDRESS **Nampa Fire Station – 923 1st Street South, Nampa ID 83651** AQS ID **160270002** EVALUATION DATE **04/08/2020** EVALUATOR **Ed Jolly – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **N-Core** SITE ADDRESS **Eagle Road & I-84, Meridian ID 83642**
AQS ID **160010010** EVALUATION DATE **04/08/2020** EVALUATOR **Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Paul** SITE ADDRESS **201 N. 1st Street West, Paul ID 83347** AQS ID **N/A** EVALUATION DATE **05/04/2020** EVALUATOR **Chad Silver – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.			X*	
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.			X**	
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? See below.					
Other Comments: *Tree stands 5.1 meters taller than probe inlet. Tree is only located 5.2 meters away from probe inlet. **Tree is located 5.2 meters away from probe inlet. Higher branches overhang probe inlet. DEQ will contact the school where the monitor is located to try to get approval for tree to be trimmed.					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Porthill** SITE ADDRESS **Tavern Farm Rd., Porthill ID 83853** AQS ID **N/A** EVALUATION DATE **5/5/2020** EVALUATOR **Kelby Sullins – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Potlatch** SITE ADDRESS **510 Elm Street, Potlatch ID 83855**
AQS ID **N/A** EVALUATION DATE **04/01/2020**
EVALUATOR **Zac Bishop – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Preston** SITE ADDRESS **450 East 800 South Preston, ID 83263** AQS ID **160410002** EVALUATION DATE **05/04/2020** EVALUATOR **Clay Woods – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Rexburg** SITE ADDRESS **Madison Middle School – 575 W. 7th Street, Rexburg ID 83440**
AQS ID **N/A** EVALUATION DATE **05/08/2020**
EVALUATOR **Roger Sauer – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Salmon** SITE ADDRESS **N. Charles Street, Salmon ID 83467** AQS ID **160590004** EVALUATION DATE **04/08/2020** EVALUATOR **Roger Sauer – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Sandpoint** SITE ADDRESS **U of I Research Center – 2105 N. Boyer Ave., Sandpoint ID 83864** AQS ID **160170003** EVALUATION DATE **5/7/2020** EVALUATOR **Kelby Sullins- Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Soda Springs** SITE ADDRESS **Caribou Hospital – 300 S. 3rd Street West, Soda Springs ID 83276** AQS ID **N/A** EVALUATION DATE **05/02/2020** EVALUATOR **Clay Woods– Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **St. Maries** SITE ADDRESS **USFS Building - St. Maries ID, 83666**
AQS ID **160090010** EVALUATION DATE **4/29/2020**
EVALUATOR **Kelby Sullins – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME Rock Creek SITE ADDRESS **650 W. Addison, Twin Falls ID 83301**
AQS ID **160830007** EVALUATION DATE **05/04/2020**
EVALUATOR **Chad Silver – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Weiser** SITE ADDRESS **690 W. Indianhead Rd., Weiser ID 83672** AQS ID **N/A** EVALUATION DATE **04/23/2020** EVALUATOR **Ed Jolly – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb

SITE NAME **Garden City** SITE ADDRESS **Ada County Fairgrounds (Alworth St.) Garden City, ID 83714**
AQS ID **16-001-0020** EVALUATION DATE **04/10/2020**
EVALUATOR **Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR PM2.5, PM10, PM10-2.5,and Pb					
SITE NAME **Pinehurst** SITE ADDRESS **106 Church Street, Pinehurst ID 83850** AQS ID **160790017** EVALUATION DATE **4/29/2020** EVALUATOR **Kelby Sullins – Idaho DEQ**					
APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level (AGL) for neighborhood or larger spatial scale, 2-7 meters for microscale spatial scale sites and middle spatial scale $PM_{10-2.5}$ sties. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood or larger spatial scales avoid placing the monitor near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, a minimum of 2 meters of separation from walls, parapets, and structures is required for rooftop site placement.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	Spacing from roadways is dependent on the spatial scale and ADT count. See section 6.3(b) and figure E-1 for specific requirements.		X		
Are there any changes that might compromise original siting criteria? No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR SO2

SITE NAME **N-Core** SITE ADDRESS **Eagle Road & I-84, Meridian ID 83642**
AQS ID **160010010** EVALUATION DATE **04/07/2020** EVALUATOR **Ed Jolly – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.	Not a microscale site			X
6. SPACING FROM ROADWAYS	There are no roadway spacing requirements for SO2.				X
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					

Other Comments:

PART 58 APPENDIX E SITE EVALUATION FORM FOR SO2

SITE NAME **Pocatello Sewage Treatment Plant** SITE ADDRESS **Batiste Chubbuck Rd., Pocatello ID 83204**
AQS ID **160050004** EVALUATION DATE **05/01/2020** EVALUATOR **Clay Woods – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc*., and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.	Site is Middle Scale.			X
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.		X		
6. SPACING FROM ROADWAYS	There are no roadway spacing requirements for SO2.				X
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. No.					
Other Comments:					

PART 58 APPENDIX E SITE EVALUATION FORM FOR SO2

SITE NAME__**Soda Springs**_____SITE ADDRESS **5-mile Road, Soda Springs ID 83276**
AQS ID__**160290031**_____EVALUATION DATE__**05/01/2020**_____EVALUATOR **Clay Woods – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.	Site is Middle-Micro Scale.			X
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.		X		
6. SPACING FROM ROADWAYS	There are no roadway spacing requirements for SO2.				X
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section. See below.					

Other Comments:
Site was originally placed in its current location as a result of a combination of monitoring and modeling. Some recent wind roses have shown some variations compared to the original wind roses.

PART 58 APPENDIX E SITE EVALUATION FORM FOR O3

SITE NAME__**Pocatello**___SITE ADDRESS_ **Corner of Garrett and Gould Streets, Pocatello ID 83204**
AQS ID__**160010015**_____EVALUATION DATE__**05/04/2020**___EVALUATOR **Clay Woods – Idaho DEQ**

APPLICABLE SECTION	REQUIREMENT	COMMENTS	CRITERIA MET?		
			YES	NO	N/A
2. HORIZONTAL AND VERTICAL PLACEMENT	2-15 meters above ground level. 1 meter vertically or horizontally away from any supporting structure, walls, *etc.*, and away from dusty or dirty areas. If located near the side of a building or wall, then locate on the windward side relative to the prevailing wind direction during the season of highest concentration potential.		X		
3. SPACING FROM MINOR SOURCES	(a) For neighborhood scale avoid placing the monitor probe inlet near local, minor sources. The source plume should not be allowed to inappropriately impact the air quality data collected at a site.		X		
	(b) To minimize scavenging effects, the probe inlet must be away from furnace or incineration flues or other minor sources of SO_2 or NO.		X		
4. SPACING FROM OBSTRUCTIONS	(a) To avoid scavenging, the probe inlet must have unrestricted airflow and be located away from obstacles. The separation distance must be at least twice the height that the obstacle protrudes above the probe inlet.		X		
	(b) The probe inlet must have unrestricted airflow in an arc of at least 180 degrees. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential.		X		
5. SPACING FROM TREES	(a) To reduce possible interference the probe inlet must be at least 10 meters or further from the drip line of trees.		X		
	(c) No trees should be between source and probe inlet for microscale sites.				X*
6. SPACING FROM ROADWAYS	See spacing requirements table below		X		
9. PROBE MATERIAL & RESIDENCE TIME	(a) Sampling train material must be FEP Teflon or borosilicate glass (e.g., Pyrex).		X		
	(c) Sampling probes for reactive gas monitors at NCore must have a sample residence time less than 20 seconds.		X		
Are there any changes that might compromise original siting criteria? If so, provide detail in comment section.					

Other Comments:
*Not a microscale site.

Roadway average daily traffic, vehicles per day	Minimum distance[1] (meters)	Minimum distance[1, 2] (meters)
≤1,000	10	10
10,000	10	20
15,000	20	30
20,000	30	40
40,000	50	60
70,000	100	100
≥110,000	250	250

[1]Distance from the edge of the nearest traffic lane. The distance for intermediate traffic counts should be interpolated from the table values based on the actual traffic count.

[2]Applicable for ozone monitors whose placement has not already been approved as of December 18, 2006.

Appendix E. Public Comments and Responses